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LOCAL GOVERNMENT BOARD.

MANUAL



ON THE

PREPARATION OF

STATE-AIDED HOUSING SCHEMES.



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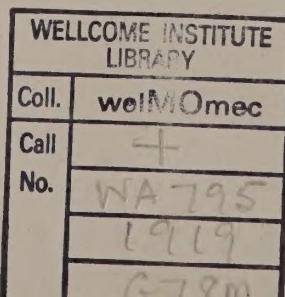
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MEMORANDUM BY THE LOCAL GOVERNMENT BOARD.

In the Housing, Town Planning, etc., Bill now before Parliament, the Government are proposing that powers shall be given to the Board as to relieve schemes approved by the Board from the necessity of complying with such requirements of byelaws and local Acts in regard to new streets and buildings as are inconsistent with any proposals in such schemes.

The Shortage of Houses.

1. The shortage of working-class housing accommodation is one of the most serious problems with which the country is faced at the conclusion of the War. In many districts, and especially in rural areas, such a shortage existed before the War, and in the years immediately preceding 1914 the amount of building had fallen appreciably below the annual requirements of new houses. Since 1914, house building has been almost entirely suspended throughout the country, and the need for new building is urgent. The situation is now rendered more difficult by reason of the greatly enhanced cost of building resulting from war conditions, and uncertainty as to the future level of costs.

2. The present problem differs from the pre-war problem not only in degree but in kind. The shortage has affected the houses of all classes of working people and is not confined to those of the poorer classes, with whose housing local authorities have hitherto chiefly been concerned. The standard of accommodation and equipment desired in their houses by all sections of the working people has been rising, and the Board view with approval this tendency towards an improved standard. There already exist, moreover, a large number of houses which in one respect or another fall far short of the desirable minimum of accommodation and amenity, and a still larger number which barely attain to it. The Board are of opinion, therefore, that the most serious shortage is of good houses, adequate in size, equipment and amenity to afford satisfactory dwellings for a working man's family; and that the building of this class of house should be energetically undertaken. Only by building good, well-equipped houses can the average standard be raised.

State Financial Assistance.

3. In order that immediate steps may be taken to meet the present needs the Government have decided to assist financially, for a limited period, the provision by local authorities and public utility societies of houses for the working classes, and to create a special organisation for giving assistance in this work. The nature and conditions of the financial assistance to local authorities and public utility societies are described respectively in circulars issued by the Local Government Board on the 6th February and the 24th March, 1919, which are printed in Appendices IX and X.

Housing Commissioners.

4. The Board have constituted a new organisation to stimulate the production of houses, and to meet the needs of the problem as it is now presented. In order to assist local authorities in the preparation of housing schemes and to facilitate the approval and execution of such schemes, the Board have decided to decentralise the work as much as possible and to establish district offices in charge of Commissioners, who will be assisted by expert staffs. The Regional Areas and the headquarters of these Commissioners will be found in Appendix XII.

5. The Commissioners will be ready to assist local authorities in regard to housing schemes at all stages, and to explain any questions arising out of the Government's proposals for financial assistance. They will be prepared to advise authorities in the choice and lay-out of sites and the types of houses to be erected. Their advice will also be available in the carrying out of schemes, in regard to such matters as specifications, contracts, materials, and the supply of standardised articles. The advice of the Commissioners should be obtained on these matters in order that the approval of schemes and the sanctioning of loans, although remaining, as before, a matter for the Board, may not be delayed unnecessarily.

Where special difficulties arise, or where common action by two or more authorities seems desirable, they will arrange for conferences with the authorities concerned. They will also advise and assist public utility societies and persons wishing to form them, and will help to keep such societies in close touch with the local authorities.

6. The Board trust that local authorities will afford Commissioners every facility to obtain information, and that they will avail themselves of the help of the Commissioners to the fullest possible extent.

The kind of Schemes to which assistance will be given.

7. It is the intention of the Government that the housing schemes to be carried out with State assistance should mark an advance on the building and development which has ordinarily been regarded as sufficient in the past, and that the houses to be erected should serve as a model or standard for building by private enterprise in the future.

8. This Manual is primarily for the guidance of local authorities and their advisers in the preparation and carrying out of housing schemes, but it is hoped that it will also be found of service to public utility societies and others who may be concerned with the provision of houses for the working classes.

9. While the Local Government Board consider that schemes in respect of which State assistance is sought should generally attain the standards described in the Manual, it is not intended that all the suggestions made should be regarded as hard and fast requirements. The Board recognise that many of the suggestions may need modification to meet local conditions, and they are particularly anxious to avoid monotony of treatment and the stereotyping of designs. The Board consider that all schemes submitted should be prepared by competent architects, whose duties should include the preparation of the lay-out plan and the design and planning of the houses. It is recognised, however, that, where a local authority have in their employ a properly qualified engineer or surveyor, they may consider it desirable that the schemes shall be prepared by him with the assistance of a competent architect.

10. Similarly, while certain standard principles apply to all housing schemes, there are others which must vary as between schemes in urban and rural areas, or between large schemes, equivalent in effect to the creation of new suburbs, and the provision of a small number of houses on a limited site.

11. In Appendix V will be found a Summary of the steps to be taken by Local Authorities, and in other Appendices detailed information is given upon the different points arising during the course of preparation of a scheme. Reference should also be made to the Report of the Committee appointed by the President of the Local Government Board to consider Questions of Building Construction in connection with the Provision of Dwellings for the Working Classes (hereinafter referred to as the Building Construction Committee's Report), and to the Reports of the Women's Housing Sub-Committee of the Ministry of Reconstruction, referred to in Appendix XI. The following paragraphs deal with the more important matters requiring the consideration of the Council.

Number of Houses to be Built.

12. Many local authorities have already made a preliminary estimate of the number of houses immediately required, and many have already notified to the Board the number of houses they are prepared to build. Where this estimate has not been made it should be taken in hand at once. In considering the question of the need for houses, regard should be had to any special degree of overcrowding or prevalence of houses which are unfit for habitation or for one reason or another fall definitely below a reasonable standard, to the amount of building in the past, to the probable rate of increase or decrease of the population during the next few years, to any anticipated industrial developments, and to any special increase or decrease of population which has taken place owing to war conditions or is likely to result from the termination of those conditions. The preparation of an immediate scheme should not, however, be deferred pending a detailed survey of existing buildings. Such a detailed survey, if it has not already been made, should be undertaken as soon as possible, but the task of the moment is to ascertain the number and class of houses immediately needed and to proceed with their provision.

Selection of Locality for Housing Schemes.

13. The right location of the schemes is a matter of much importance, and can only be secured as the result of a sufficiently broad survey of the present needs and probable future development of the towns or districts. An open system of development and greater extent of open spaces for allotments, recreation grounds, etc., can more readily be obtained by the location of housing schemes outside or on the outskirts of towns. Where new centres of employment have been established at some distance from an existing town, or where a decentralising tendency is manifest, the question should be considered whether the best interests of the population would not be served by building a detached and self-contained suburb or small town. In various cases, such as that of a mining area where the mines are scattered, it should be considered whether the housing needs cannot best be met by the provision of a centrally situated village combined with adequate transit facilities.

14. In selecting localities for housing schemes the following considerations should be given due weight :—

- (a) The probable future development of the town or district based on a forecast of growth and town-planning requirements.
- (b) The accessibility to industrial, social, educational and recreational centres.
- (c) The sufficiency of transit facilities for building materials and for the occupants of the houses.
- (d) The prospect of obtaining, at reasonable prices, suitable land, having due regard to health and amenity.

The Selection of the Locality in Rural Areas.

15. In selecting localities for rural housing, the advantage of collecting the houses in existing or new villages, rather than building them in twos or threes on the various farms should be considered. The problems of rural education and social life generally would be simplified if the houses were not too much scattered, and this point should be given due weight in conjunction with the more purely agricultural considerations affecting the choice of site.

Choice of Site.

16. Having determined the best general location of the scheme, the actual site or sites must then be selected. Before making this selection it will be well for the local authority to consult their professional advisers. In addition to the general considerations mentioned in paragraph 14, the following points will need to be borne in mind and should be taken into account in considering sites offered for sale :—

- (a) Relation to existing or contemplated residential and factory sites.
- (b) The configuration of the ground for economical development, the suitability of the subsoil and the aspect of the site if sloping. Northern sites are not desirable, and sites sloping steeply to the north should not be selected.
- (c) Possibility of extension and future development.
- (d) Amenities of the site, trees, fertility of the soil for gardens, prospects, etc.
- (e) Open spaces in the neighbourhood and adaptability of parts of site for this purpose and for shops and larger houses.
- (f) Convenience and economy in the provision of sewerage, water supply and other services.

In the case of rural housing especially, the questions of adequate water supply and drainage will be important factors in the choice of sites.

Survey of the Site.

17. A careful survey of the site should be made in order to secure that all its advantages may be developed. Note should be taken of any features of interest or beauty, of the levels of any road connections, or other points of importance. Well-grown hedges and trees should be noted. A contour survey should be made of all sites of an undulating character in order that the most economical development may

be secured. For land with even gradients, contours showing variations of level every 5 ft. in height will suffice, but on sharply undulating sites contours every 2 ft. are desirable to secure economical development.

Planning the Site.

18. The greatest economy in lay-out will depend on full advantage being taken of all the opportunities which the site affords. The location of different parts of the scheme should first be determined, and reservations made for open spaces, shops, and other buildings serving a beneficial purpose in the scheme ; these being grouped where possible to form a centre. The lay-out should, in addition to satisfying the utilitarian requirements, develop the order and individual character of a good design. By so planning the lines of the roads and disposing the spaces and the buildings as to develop the beauty of vista, arrangement and proportion, attractiveness may be added to the dwellings at little or no extra cost.

Number of Houses per acre.

19. The number of houses to be built on a site should not, save in exceptional circumstances, exceed 12 to the acre in urban areas and 8 to the acre in rural areas. This method of development involves the use of rather more land than the older method, but it must be remembered that the cost of the land bears a small proportion to the total cost of a scheme, and the cost of the additional land required has a comparatively small effect on the gross cost of each house. This matter is dealt with in Appendix I.

20. Where roads have already been made which were laid out for more than 12 houses to the acre, and the number of houses to the acre cannot be reduced without serious waste of existing road frontage, or in other special cases, a rather higher number may be permitted, but the greater local density should be compensated for by the provision of suitable open spaces in the neighbourhood.

Planning and Construction of Roads.

21. Great care should be taken to design the lay-out so as to secure economy and convenience :—

- (i) By providing direct routes of easy gradient for main thoroughfares. The existing or future development of adjacent land should be considered in this connection.
- (ii) By planning the minor roads mainly to afford the best building frontage and so as not to attract through traffic.
- (iii) By distributing the different types of houses on roads which afford the best aspect for each type.
- (iv) By avoiding unnecessary waste of frontage at road junctions.

22. Economy may also be secured by eliminating needless cross roads, by avoiding acute angles or multiple road junctions, and by arranging houses round greens, or on short roads, or on three sides of a quadrangle, or with footpath access to short rows from main roads. Economy should not be sought by cramping the frontage of the houses or unduly curtailing the spaces between the groups of houses.

23. The placing of the houses should be considered in reference to the sunlight, which is very rapidly obscured if the houses face one another at less distance than 70 ft. On main roads where there is much traffic it is particularly desirable that the houses should be well set back. It may sometimes be an advantage on account of the dust and noise of the road, or in order to secure a better aspect for the houses, that they should be planned mainly on short side roads ; in some cases footpath access to houses set at right angles to the main road may be sufficient.

24. Save in exceptional circumstances back roads should not be provided, but access from the front should be arranged to the back garden of each house.

25. The width of the carriageways and footways should be determined by the probable traffic they will be required to carry. In the type of development suggested, adequate distance between the houses should be secured irrespective of the width of the roadway. In connection with main roads, space may be left for future widening. On such roads it will be recognised that nothing is to be gained by unduly curtailing the width or by reducing the first cost at the expense of a proportionately increased cost of maintenance.

26. Minor roads intended solely for the purpose of giving access to dwelling-houses should be constructed in a less costly manner than thoroughfares. Economies can be effected on the following lines :—

- (a) By reducing the width of carriageways and paved surfaces on footways.
- (b) By adopting a thickness and mode of construction appropriate to the anticipated traffic.
- (c) By adopting lighter or less costly kerbing and channelling than is often used, or in suitable cases omitting one or both of these.

Illustrations of suggested types of roads will be found in Appendix II.

27. As far as possible all drains, sewers, water and gas pipes, and electric-light mains, with house connections up to the boundary of the road, should be laid in before the surface of the carriageway and footways is completed.

Fencing.



28. In view of the suggested open development, the question of fencing and entrance gates becomes important, both in reference to economy and amenity. Where practicable, walls or expensive types of fencing should be avoided, and hedges should be planted instead. Concrete or other post and wire fences will usually suffice pending the growth of the hedges. Gates may be of oak, which will not require painting. Privacy at the back may need to be secured by a more substantial division fence extending for a short distance from the house.

Planting.

29. The permanent attractiveness of the scheme will greatly depend on judicious planting. Trees, shrubs and hedges should be chosen of kinds which are likely to flourish in the particular climate, soil and general conditions prevailing in the locality. They should be placed in positions suitable to the size of their ultimate growth and where they will contribute to some definite effect. Wherever possible, existing trees, hedges or shrubs already growing on the land should be preserved.

Drainage of the Houses.

30. In the planning of the site and the disposition of the individual groups of houses upon the land, the question of economy in drainage should be considered. In so far as other considerations will permit, lines should be selected for the roads which will secure suitable gradients for sewers and drains with the minimum of excavation. Economy may also be effected in the placing of manholes by avoiding a too rigid limit of distance apart. In many cases the system of the common drain or sectional drainage will be found simpler, less costly, and better adapted for housing schemes, than the use of a separate connection to the sewer in the road from each house. The following suggestions are made with a view to economy and simplicity :—

- (a) The adoption of the common drain, with one connection to the sewer, which may serve a group or groups of houses.
- (b) One intercepting trap and system of ventilation for each group.
- (c) Manholes to be used mainly at the junction of common drains, inspection chambers or rodding eyes being provided to secure the necessary means of cleaning the drains at other points.
- (d) Connections from the dwelling to be brought into the w.c. branch drain (as near the building as practicable) in order to reduce the number of connections to the common drain.

This subject is dealt with more fully in Appendix III.

Smaller Urban Schemes.

31. The above suggestions have been made especially with a view to schemes of considerable extent, but it will be clear that many are equally applicable to smaller schemes. Very few schemes will be so small that no other requirements than those of the houses themselves have to be satisfied, and few sites so limited that they will not offer some opportunities of which it is desirable to take advantage.

Rural Schemes.

32. In rural areas the schemes will usually involve the provision of a relatively small number of houses in individual parishes.

Some few houses for the head horsemen and stockmen will need to be situated near the homesteads, but generally houses should be built near some village, or at least in groups sufficiently numerous to form a nucleus in themselves and to render reasonable educational and recreational facilities possible. Such a plan will usually result in economy in building and in the supply of water and other services.

33. It may be desirable to group labourers' cottages near a colony of small holders. In such cases local authorities about to make provision for farm labourers' cottages should consult with the Small Holdings Committee of the County Council, with a view to the possible need of co-ordinating their proposals with those for providing small holdings and for the settlement of ex-soldiers on the land.

The County Council are the authority for the provision of housing accommodation for small holders, but the Rural District Council are primarily responsible for the housing of the working classes in their area ; and Section 50 of the Housing, Town Planning, etc., Act, 1909, defines a cottage for the purposes of the Housing Acts as including a garden of not more than one acre.

House Accommodation.

34. In designing house plans a consideration of the first importance is the matter of aspect, and a uniform plan should not be adopted for different aspects. Typical plans will be found at the end of this Manual illustrating generally the requirements of the Board. These plans have been prepared with due regard to the areas desirable for the different rooms. They are only for general guidance and are not intended to hamper initiative or to prevent full expression being given to local customs and traditions, or the use of local building materials.

35. With regard to details of accommodation and economy in planning and design, special attention is directed to Part VI, and paragraphs 25 to 75 of Part XII. of the Building Construction Committee's Report.

In considering questions of internal planning, reference should also be made to the Interim and Final Reports of the Women's Housing Sub-Committee of the Ministry of Reconstruction, which was appointed to consider plans of houses, with special reference to the convenience of the housewife. These Reports have already been mentioned and are referred to in Appendix XI.

Local authorities will appreciate the importance of considering the internal arrangements from the point of view of the housewife, and for this purpose they will no doubt obtain the co-operation and advice of competent women.

36. Adequate frontage, generally of not less than 20 ft., should be given to the buildings to allow convenient planning, good lighting of all the parts and the avoidance of back projections.

37. Good exterior design in harmony with the surroundings and adapted to the site should be secured ; on sites of varying character each individual group of buildings will need to be carefully adapted to suit its position, and to take advantage of opportunities as to aspect, prospect and levels which that position offers. By the choice of suitable local materials, and the adoption of simple lines and good proportion and grouping of the buildings, with well considered variation in design and in the treatment of prominent parts, good appearance may be secured within the limits required by due economy.

38. It will suffice here to summarise the general requirements which the Board consider should be met.

- (a) The self-contained two-storey cottage type should generally be adopted.
- (b) Each house should ordinarily include the following accommodation : living-room, scullery, larder, fuel store, w.c., bath in separate chamber, and three bedrooms.
- (c) Most schemes should include a considerable proportion of houses having parlours and also a certain number of houses having more than three bedrooms. In some cases, it may be desirable to include a proportion of houses with only two bedrooms.

39. *The living-room* should be arranged with as few doors as practicable, which should be placed so that they will not interfere with the comfort and convenience of those occupying the space about window and fire. The cooking range, whether in this room or the scullery, should be placed on a wall at right angles to a window wall. The best aspect for the living-room is south-east, and it must never have a northerly aspect except when sunlight can be admitted at the other end of the room.

40. *The parlour* should be planned to leave comfortable space round fire and window. The best aspect is a westerly one. Preference should, however, be given to the living-room in this matter of aspect.

41. *The scullery*, especially, depends for convenience on arrangement as well as size, and, when it is to be used as a place for cooking, should be provided with the necessary space for small table and cupboard. While sufficient space should be given for convenience, it is not desirable to encourage the use of the scullery as a living room. The sink should be placed under or near the window, which should preferably overlook the garden. The copper should be fitted with a steam outlet. A suitable area outside the back door of the house should generally be paved with cement or other impervious material.

42. *The bath* should, where practicable, be in a separate compartment.

43. *Hot water* should generally be provided to the sink and to the bath.

44. *The larder* should be on the northerly side of the house. Where this is impracticable, the window should be screened from the sun.

45. *The coal store* should generally be so placed that coal may be delivered from outside, and fetched for use under cover.

46. *The w.c.* should be accessible under cover. In larger houses it may be on the first floor. Where there is an earth-closet, it must be constructed outside the house.

47. *The stairs* should usually start from the entrance lobby, and a window to open should be provided to light and ventilate the landing.

48. *The bedrooms* should be placed as far as possible on the more sunny side of the house; two at least should have fireplaces, and adequate ventilation should be provided for any not having fireplaces. In every bedroom there should be one window of which the top is at least 6 ft. 6 in. from the floor. If sloping ceilings are adopted, proper headroom must be provided for furniture.

49. Projections or detached outbuildings for coals and w.c. should generally be avoided in urban or suburban areas.

50. Economy must be secured in every possible way. Among other means it may be obtained by adopting simple planning and design; by placing those parts of the house requiring plumbing and drainage services as near as possible together; by grouping the flues into as few chimney stacks as possible; by adopting a reasonable height for the rooms, say 8 ft.; and by avoiding needless exterior works requiring periodical painting, such as bargeboards, fascias, and imitation timber. It should not, however, be secured by cutting down unduly the size of the rooms, and should not be attempted by adopting other than sound methods of construction.

Supply of Material.

51. The Director of Building Material Supplies, Ministry of Munitions, Caxton House, Tothill Street, London, S.W. 1, is purchasing on behalf of the Government considerable quantities of materials which will be required for housing schemes. The materials in question are as follows:—

1. Bricks.
2. Tiles.
3. Slates.
4. Drain pipes.
5. Cement.
6. Washing coppers.
7. Ironmongery.
8. Sanitary ware.



52. Every Council should, before inviting tenders, ascertain from the Director the nominal prices of these articles, which prices should be used merely as a basis for tendering. These prices will be subject to adjustment as between the Ministry of Munitions and the Council, the intention being that the Council shall be charged not more than the market price at the time that the articles are delivered.

53. The Director of Building Material Supplies has already ordered a supply of all the materials mentioned above. There are, however, special conditions in regard to some materials which require further investigation. These include ranges, boilers, coppers and rain-water goods, and also ironmongery and sanitary ware. In connection with the supply of these materials, arrangements are being made for the appointment of a Committee to select a range of patterns and samples of these goods. These will then be regarded as standards. They will offer a sufficient variety to meet all usual requirements and will then be ordered by the Director of Building Material Supplies in considerable quantities.

54. In this proposal for standardisation there is no reason whatever for any delay by the local authorities in proceeding immediately with the preparation and carrying out of the schemes, as supplies will be available immediately they are required.

Additions to the Manual.

55. Memoranda will be issued from time to time in supplement of this Manual.

LOCAL GOVERNMENT BOARD,
WHITEHALL, S.W. 1,
8th April, 1919.

APPENDIX I.

THE LAY-OUT OF SCHEMES.

General Considerations.

1. In laying out a site general considerations come first, such as the location of the different parts of the scheme and reservations for open spaces. These open spaces may often be provided suitably on parts of the land not so attractive or convenient for the erection of dwellings. In the case of larger schemes such considerations will arise as the setting aside of sites for larger houses, schools, clubs, other public or semi-public buildings, or groups of shops. In each case positions and sites suitable on account of their character should be selected. It will be found both economical and generally convenient to group many of these special buildings around some centre where social life and other activities can be focussed, and in relation to which the remaining roads and other parts of the scheme may be laid out and adapted to the site and circumstances of each case. The more important roads for providing convenient access to and about the estate would be the next consideration. When these have been located, the minor roads, drives, or footways necessary to provide frontage for and give access to the required number of houses, with due regard to convenience and economy of road costs, would be filled in to complete the lay-out.

2. Where the land is approximately level, the nature of the ground will not be a dominating factor in the arrangement of the roads. With undulating land, however, if reasonable economy is to be secured, both in development costs and in connection with the foundations for buildings, the lay-out plan must be greatly influenced by the nature of the site. It is for this reason that the necessity for the preparation of a contour plan of all undulating estates has been emphasised in the Memorandum.

Sloping Sites.

3. In dealing with sloping sites special considerations arise which vary according to the degree of steepness. There are three main directions which the roads may take in relation to the contour lines (*See Illustration No. 1*).

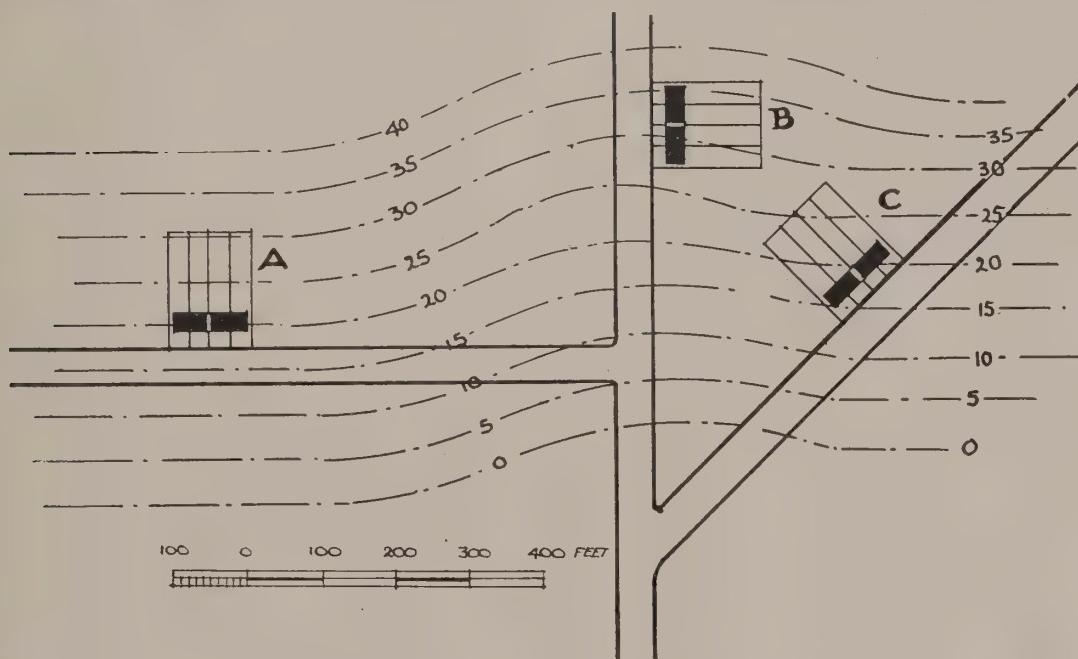


ILLUSTRATION NO. 1.

Plan showing sites for buildings facing a road running—

- A. Parallel to the contours.
- B. At right angles to the contours.
- C. Diagonally to the contours.

(A) Where the roads are planned to follow the contour lines, the houses on the two sides of the road are not level; those on the lower side require under-building, if the floor is to be raised to the level of the road. It may not always be necessary thus to raise the level of the floor, especially on a southern slope where the aspect allows the living rooms to have windows overlooking the garden at the back. On these contour roads the surface of the ground is usually parallel to the horizontal lines of the front elevation of the buildings. This is an advantage to their appearance, while the slope of the garden lends itself to regular terraces or banks. (*See Illustration No. 2, Fig. A.*)

(B) Where the slope is not steep, roads at right angles to the contours have several advantages. Drainage is usually simple and economical, and the houses on both sides of the road are approximately level. If the houses are built in pairs, or in groups of four with one break in level near the centre, little extra cost in foundations is entailed by the slope. (*See Illustration No. 2, Fig. B.*) The break of level in the group of four may often be masked by a gable (*see Fig. B.1*), or the roof may be continued with a level ridge, which would enable extra bedrooms to be provided on the second floor of the house or houses at the lower end of the block (*see Fig. B.2*).

(C) For the purpose of securing easier gradients or more convenient directions, many roads may have to be planned diagonally to the contour lines. It should, however, be recognised that such roads, though better for gradients, do not offer convenient sites, as the buildings would stand diagonally to the slope of the land. The building plots may, in fact, combine the disadvantages of those on roads which are parallel with, and those which are at right angles to, the contours. (See Illustration No. 2, Fig. C.)

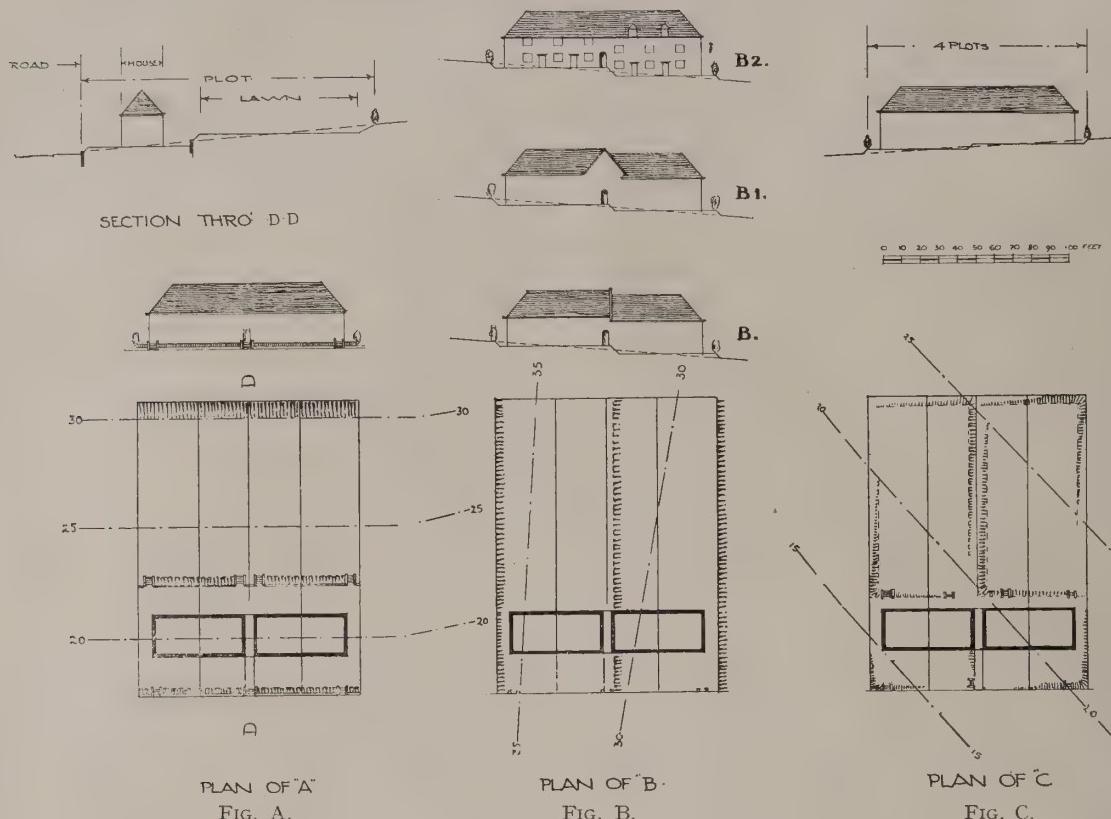


ILLUSTRATION No. 2.

Diagrammatic plans, elevations and sections of sites shown on Illustration No. 1.

Where the land is very steep, having gradients of about 1 in 6, a special method of development by means of contour roads of narrower width, having footways and houses on the higher side only, will be found to be economical and to have many other advantages, as compared with development on the usual lines. Roads planned on such land with houses on both sides involve heavy expense in cutting, filling, under-building, retaining walls and steps. Much of this would be avoided with the suggested method of development. Moreover, all the houses would face away from the hill-side, and owing to the gardens intervening between the different rows of houses they would get unobstructed sunlight and outlook over the roofs of the houses below. (See Illustration No. 3.)

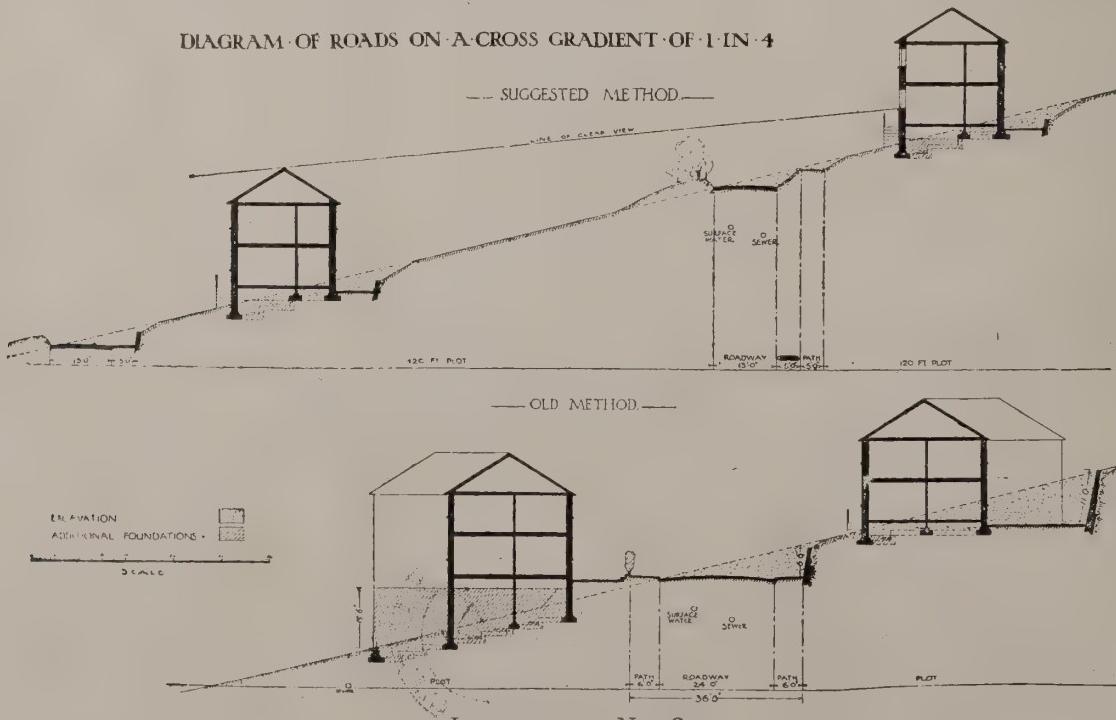


ILLUSTRATION No. 3.

Economy in Road Planning.

4. To secure economy in cost of development, each proposed road should be carefully considered with a view to determining whether its cost is justified, either on account of its value for convenience of access, or because it affords frontage for a sufficient number of buildings. When the average number of houses to the acre which may be erected on the land is limited, considerable needless expense may be incurred unless great care is exercised. The following examples of different methods of treating development plans and roads, based on a number of instances which have come under notice, show that unnecessary expense in road-making may be incurred. In each example the cost of the road-making is taken at the inclusive figure of £6 per lineal yard for the ordinary roads, and for the narrower roads a figure of £4 per lineal yard is assumed. It will be seen from the first example that the substitution of a short cul-de-sac for a through road makes a very substantial difference in the cost of development, and a comparison of the several examples will support the view that in the lay-out of housing schemes, substantial economies may be secured, without detriment to the scheme, by the exercise of care in the planning.

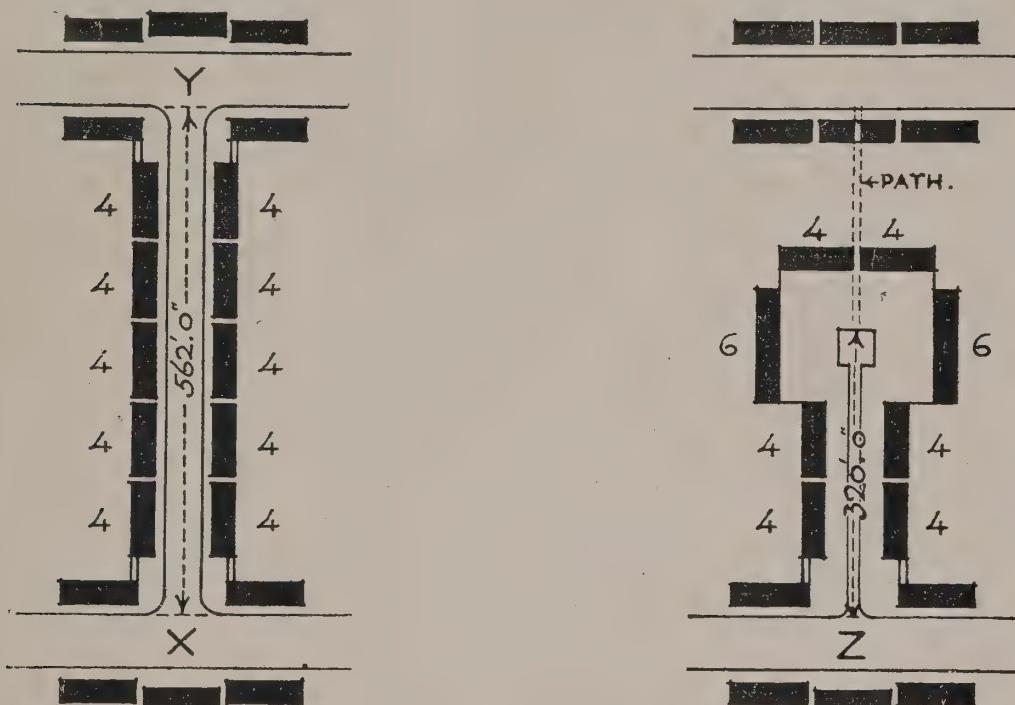
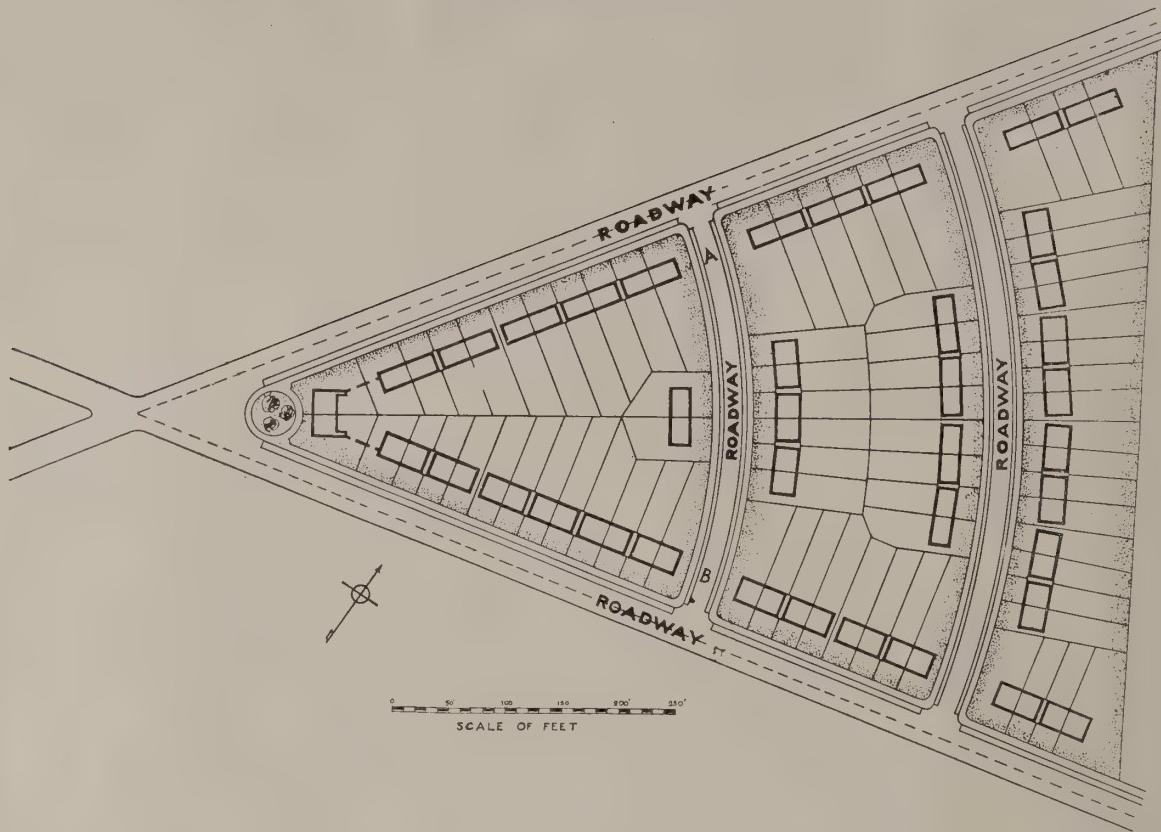


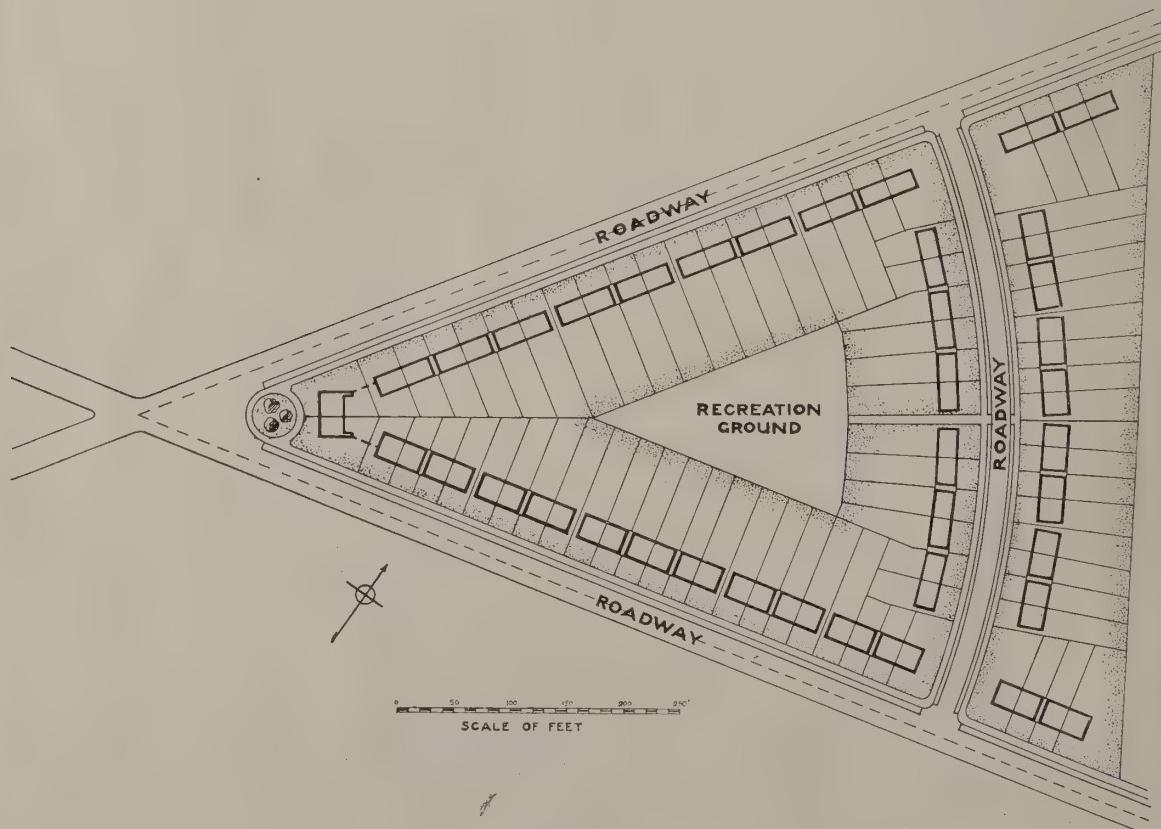
ILLUSTRATION NO. 4.

Total houses on cross road A	40	Total houses on road B	36
Houses lost on main roads X and Y owing to junction with cross road	8	Houses lost on main road Z owing to junction with road B	4
Nett houses provided for by cross road A ..	32	Nett houses provided for by road B ..	32
Total length of road, 562' 0" @ £6 per lin. yard. Total cost	£1,124 0 0	Total length of road, 320' 0" @ £6 per lin. yard. Total cost	£640 0 0
Cost per house, £1,124 : 32 ..	35 2 6	Cost per house, £640 : 32 ..	20 0 0
		@ £4 per lin. yard. Total cost	426 13 4
		Cost per house, £426 13s. 4d. : 32 ..	13 6 8
Saving in cost of road by using Type B if of same width and construction as Type A ..	£484 0 0		
Saving if narrower road and lighter construction owing to absence of through traffic ..	697 6 8		



Uneconomical Lay-out.**ILLUSTRATION NO. 5.**

The roadway marked A—B provides frontages for 8 houses only. It is 100 yards long, and on the basis assumed in para. 4 would cost about £600. It occupies frontage on the two main roads which would otherwise suffice for about $2\frac{1}{2}$ houses on each main road. By using this frontage and placing 4 additional houses on the outer circular road, the £600 may be saved without decreasing the total number of houses on the site; the area of the road A—B being added to the gardens or open space. See Illustration No. 6.

Economical Lay-out.**ILLUSTRATION NO. 6.**

Plan showing a lay-out to provide for the same number of houses as shown in Illustration No. 5, but with less road-making.

Uneconomical Lay-out.

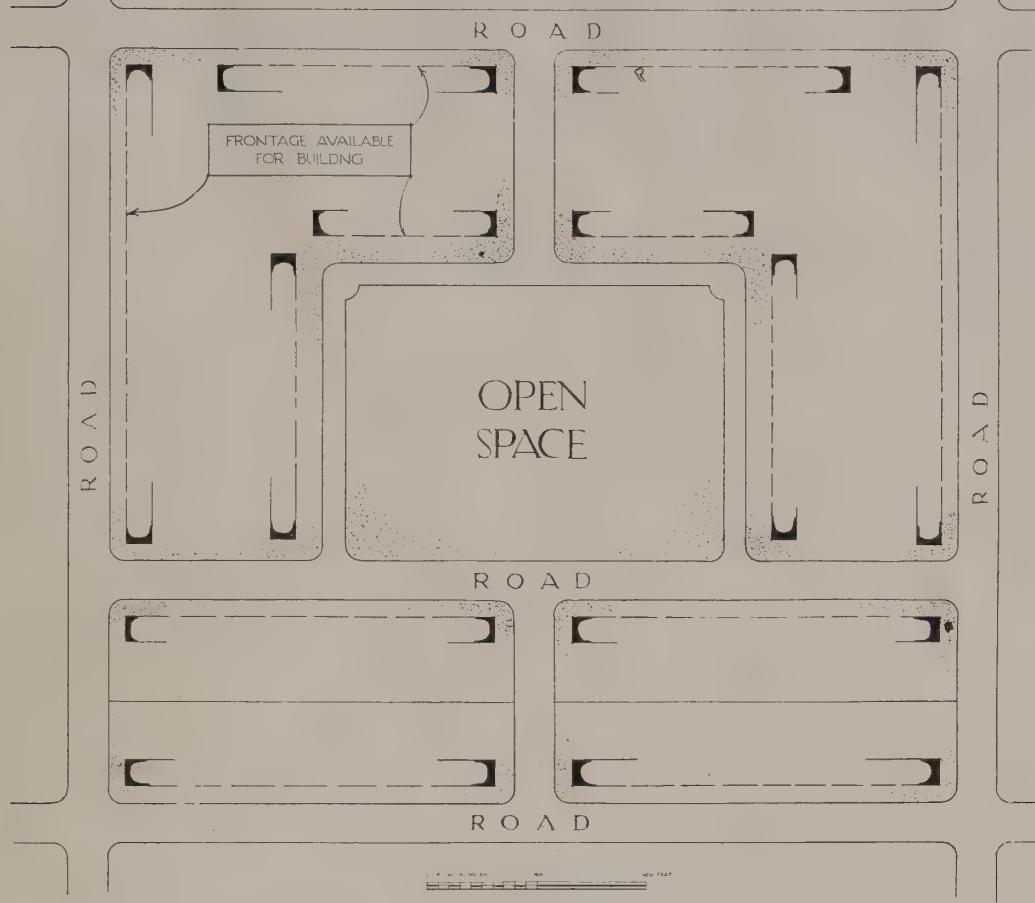


ILLUSTRATION NO. 7.

Plan of development for a square plot of about 13 acres providing for 136 houses with an average building frontage of 26 feet per house. It involves 879 yards lin. of road @, say, £6 = £5,274, and 295 yards lin. of light road round green @, say, £4 = £1,180; Total cost of roads, £6,454. This represents an average of about 45 feet of road frontage per house.

Economical Lay-out.

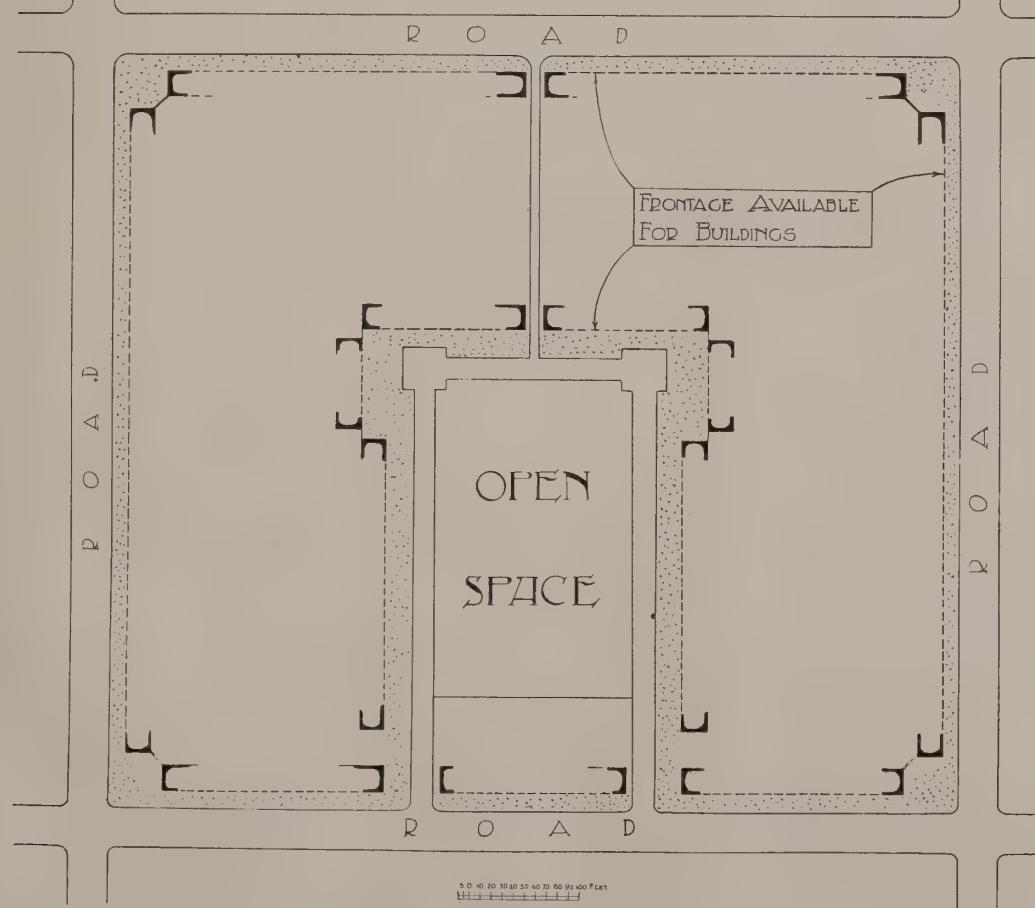
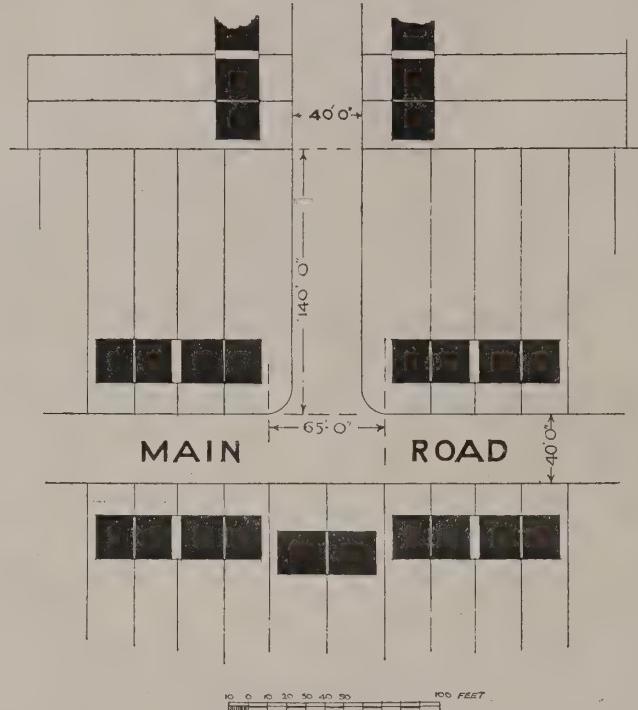


ILLUSTRATION NO. 8.

Plan of development for the same plot as No. 7, but providing for 130 houses with an average building frontage of 26 feet per house. It involves 497 yards lin. of road @ £6 = £2,982, and 340 yards lin. of light road round green @ £4 = £1,360; Total £4,342. The saving in road cost over the development shown in Illustration No. 7 is therefore £2,112. Six less houses only are provided for and the average size of garden is considerably increased.

The Treatment of Road Junctions and Corner Plots.

5. Considerable importance attaches to the treatment of road junctions. The following illustrations (No. 9, Figs. B and C) show the loss of building frontage on ordinary roads which must occur at each junction, even when the frontage is utilised to the fullest extent. If no variation is made in the size or depth of the gardens of the houses near the junction, it will be seen (Illustration No. 9, Fig. A) that the loss may be considerably increased. As the limitation of the number of houses to the acre secures a generous supply of open space about the buildings, and the amount of garden which different tenants desire to possess will vary, there seems no reason why the houses adjacent to the road junctions should not have relatively smaller gardens than those further from the junctions. In this way some economy of road costs can be secured.

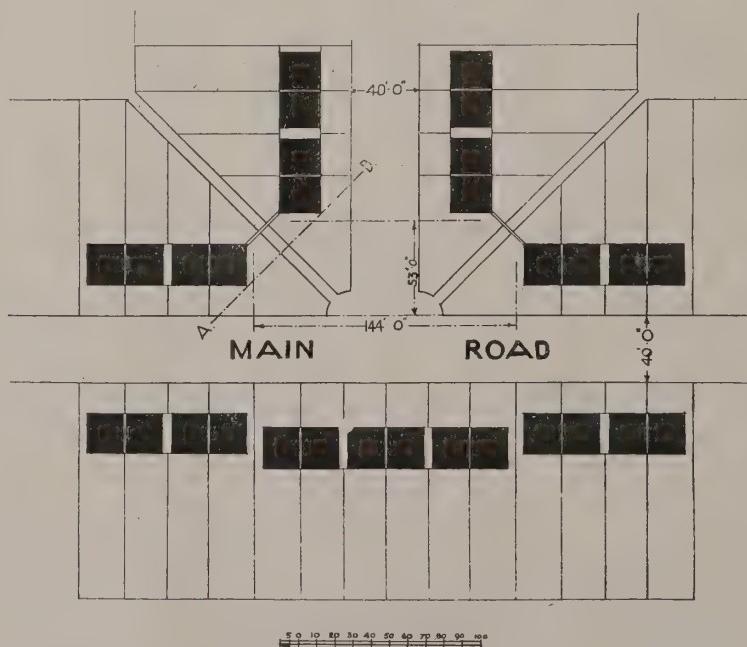


Total frontage not available owing to road junction :—

On main road	65' 0"
On side road, 140' 0" \times 2	280' 0"
Total	345' 0"

Assuming cost of road to be £6 per lineal yard, the value per foot frontage is £1, making an equivalent of £345 for the lost frontage, or £125 more than the treatment shown in Fig. C.

ILLUSTRATION No. 9, FIG. A.



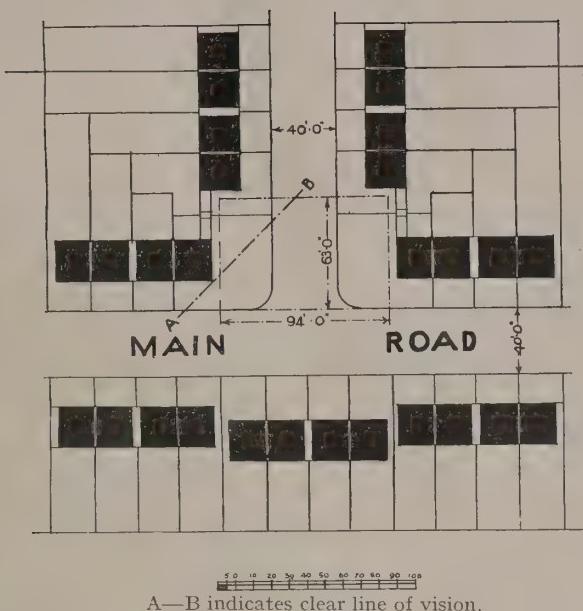
A-B indicates clear line of vision.

Total frontage not available owing to junction :—

On main road	144' 0"
On side road, 53' \times 2	106' 0"
Total	250' 0"

Assuming cost of road to be £6 per lineal yard the value per foot of frontage is £1, making an equivalent of £250 for the lost frontage.

ILLUSTRATION No. 9, FIG. B.



A—B indicates clear line of vision.

ILLUSTRATION NO. 9, FIG. C.

6. The following illustrations (Nos. 10, Figs. A and B, 11, and 12, Figs. A, B and C) suggest methods of treating road junctions, bends, and corner plots.

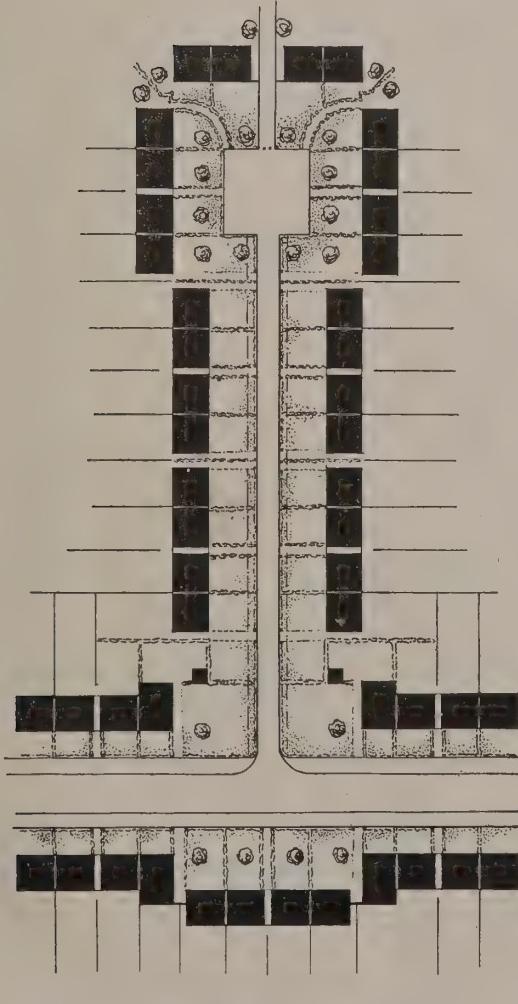


FIG. A.

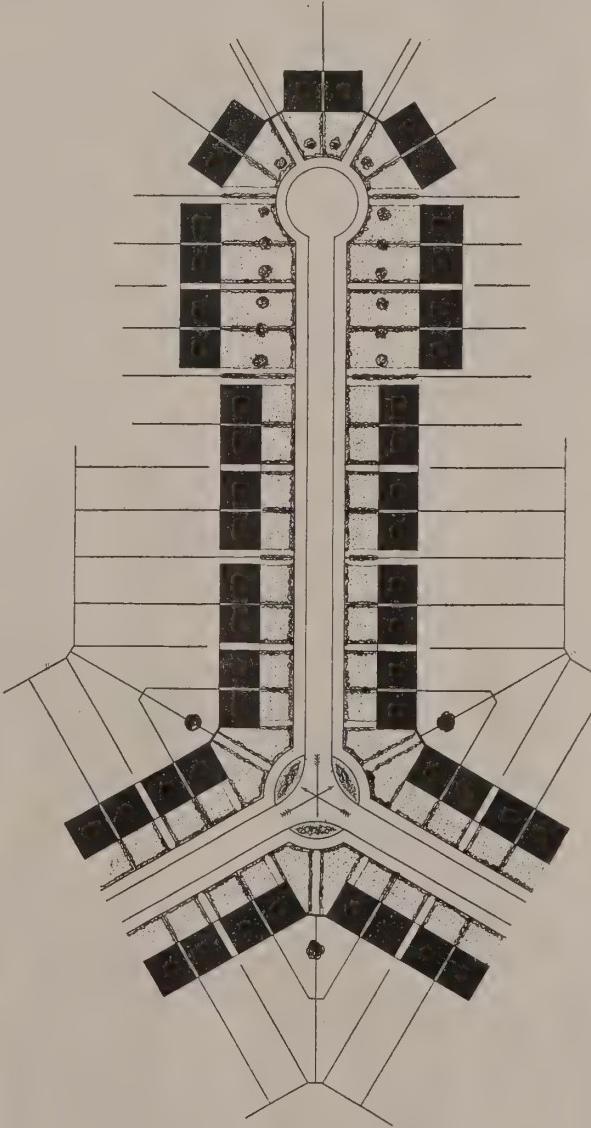


FIG. B.

ILLUSTRATION NO. 10.

Examples of short cul-de-sac roads and the placing of buildings about the junctions. The symmetrical three-way junction shown in Fig. B is frequently convenient and lends itself to successful treatment in several ways.

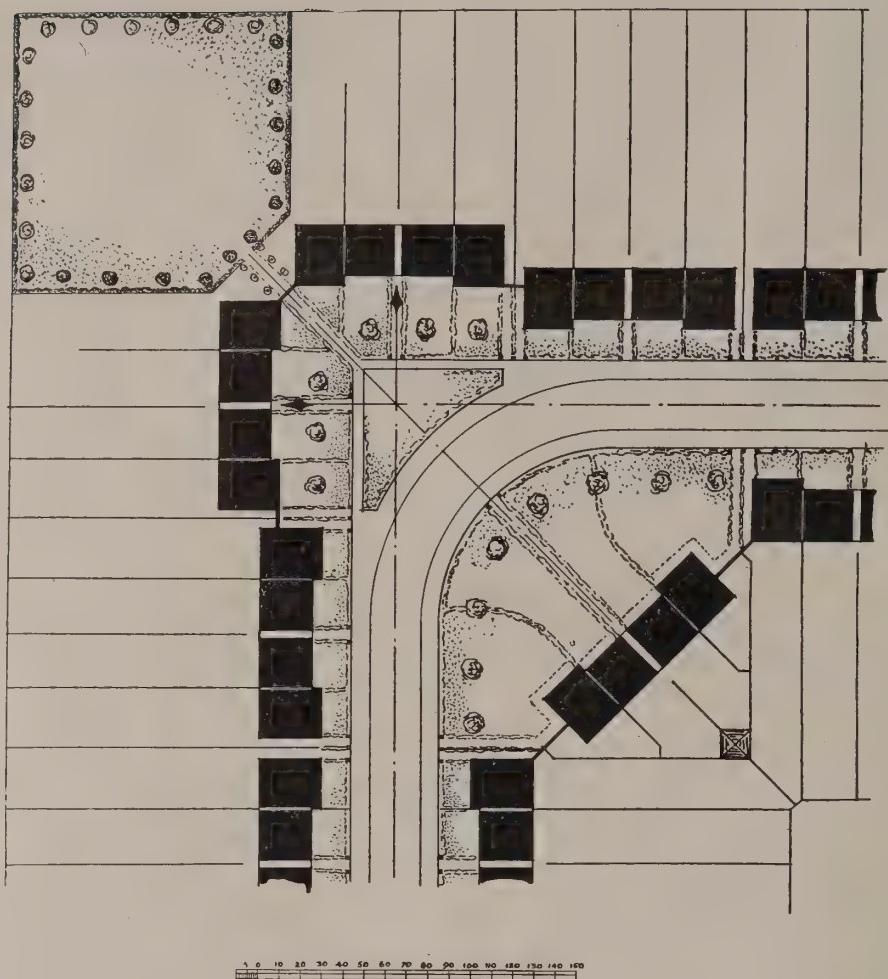


ILLUSTRATION No. 11.

Example of the placing of buildings about a right-angled turn in a road.

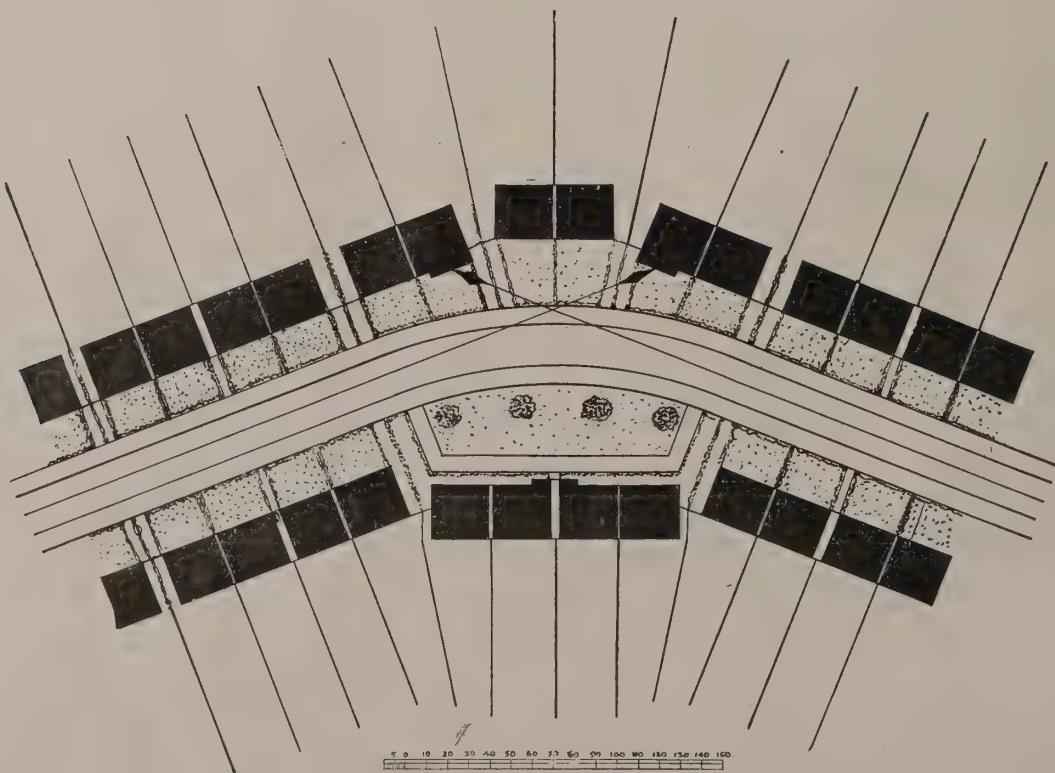


ILLUSTRATION No. 12, FIG. A.

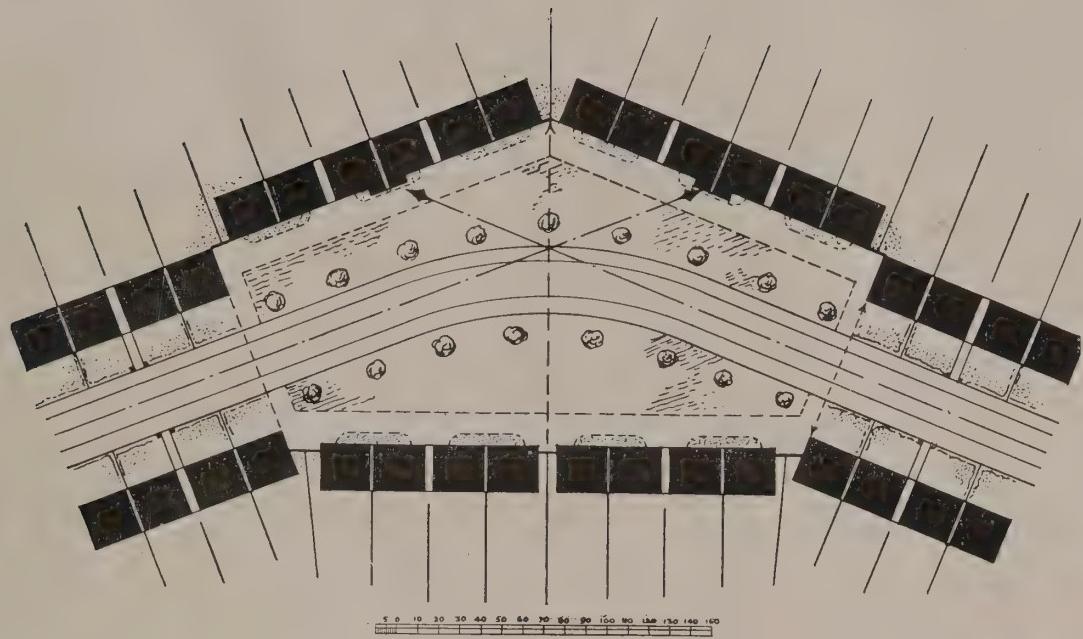


ILLUSTRATION NO. 12, FIG. B.

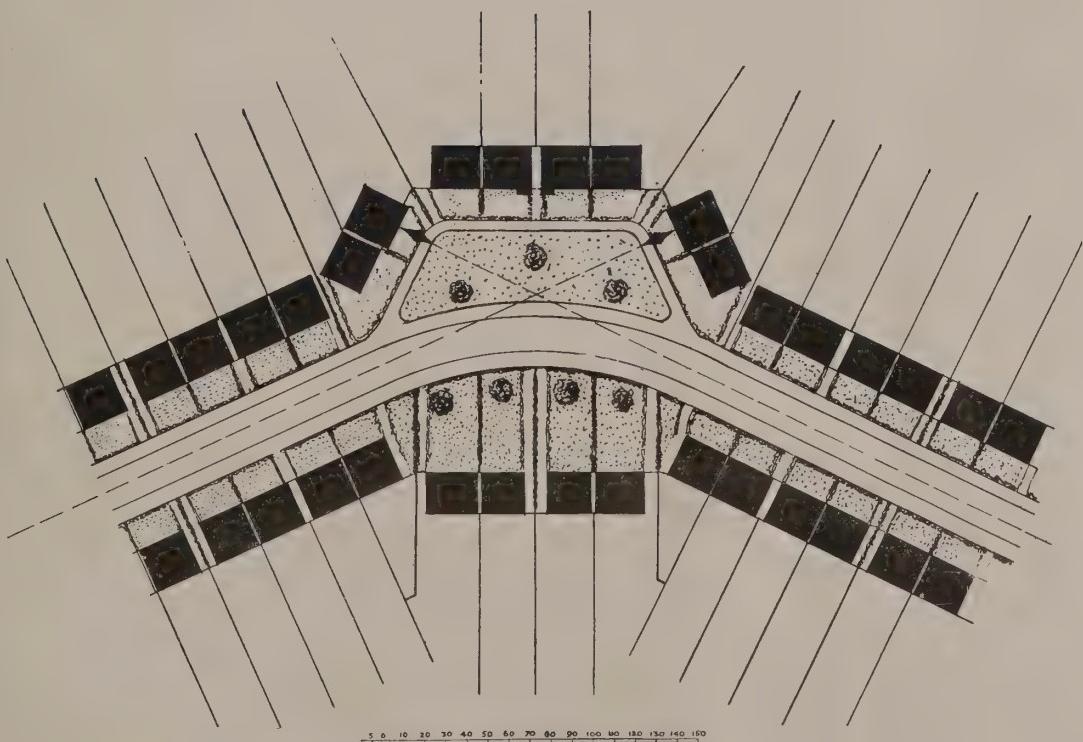


ILLUSTRATION NO. 12, FIG. C.

Illustration No. 12, Figs. A, B and C, gives examples of the placing of buildings about an obtuse-angled bend in a road.



ILLUSTRATION NO. 13.

A lay-out plan submitted by a local authority and approved by the Local Government Board for land much of which has a very steep gradient.

Number of Houses to the Acre to be Erected.

7. For determining the number of houses to the acre, it is necessary to define the area which is referred to. "Gross Area" refers to the acreage of the site including the area of roads on the site and minor open spaces, but excluding any sites reserved for buildings other than dwellings, and also excluding large open spaces; although these latter may be taken into account to the extent to which they effectively contribute to the open space about the dwellings.

By "Nett Area" is meant the land devoted to sites for dwelling houses, gardens and such minor open spaces as may be provided in place of dividing such land into separate gardens. The land occupied by the necessary roads, sites for other buildings or by large or detached open spaces is excluded.

8. Great importance is attached to the provision of an adequate area of land in connection with the State-aided housing schemes, so that sufficient gardens, allotments, playgrounds, greens or other open spaces may be arranged. Climate, soil, the nature of employment and other conditions differ so much locally that considerable variation in the arrangement and apportionment of the land as between individual gardens and other purposes will naturally be desirable. But, in whatever way apportioned, the Board desire that, where practicable, sites should be chosen in ordinary urban areas which will allow an average of about 400 square yards of land per house, equivalent to 12 houses to the acre "nett area"; and they consider that apart from exceptional circumstances the density should not generally exceed 12 houses to the acre "gross area" in Urban Areas and 8 houses to the acre "nett area" in rural districts. The Board recognise that one standard cannot be rigidly applied to all places or conditions and that some variation will be necessary to meet the different circumstances.

9. Special consideration will be given to exceptional circumstances, such, for example, as the existence of roads already made which are so spaced that great waste of road frontage might be involved by strict adherence to the limitation suggested, or the existence of other open space in the neighbourhood of the site, or any unusual limitation of the area of land suitable for the erection of houses within the district where they are required.

Effect of Reduced Density on Cost of Development.

10. As a general rule, the small saving in cost which may result from placing a larger number of houses on the land is not such as to compensate for the disadvantages which follow. The saving in actual cost of each developed house plot which can be secured by increasing the number of houses to the acre, diminishes in amount as that number increases; the area of the plot available for each house is reduced so much more rapidly than is the cost of the plot, that the cost per square yard of available ground rises steadily with the increased number of houses to the acre. An increasing proportion of each acre of land is occupied by the extra roads necessary to provide frontage for the additional houses, a smaller area therefore remains to divide into an increased number of plots. Each additional cross road added for the purpose of providing the increased frontage involves the loss of some effective building frontage at each end.

11. Where the cost of land is low and the cost of road-making relatively high, the disadvantage of crowding too many houses on the land is greater; where, on the other hand, road-making is relatively inexpensive and the price of land is high, the reverse is the case. In normal circumstances, however, the increased area of the plot obtained by adopting the standard of 12 houses to the acre is well worth the slight extra rent per plot needed to pay for the ground.



APPENDIX II.

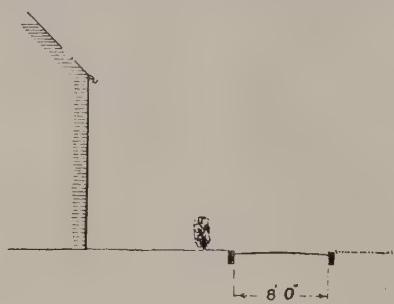
ROADS.

Suggested Types of Roads.

The width of the carriageways and footways should be determined by the probable traffic they will be required to carry. Adequate distance between the houses should be secured independently of such width.

Type No. 1.

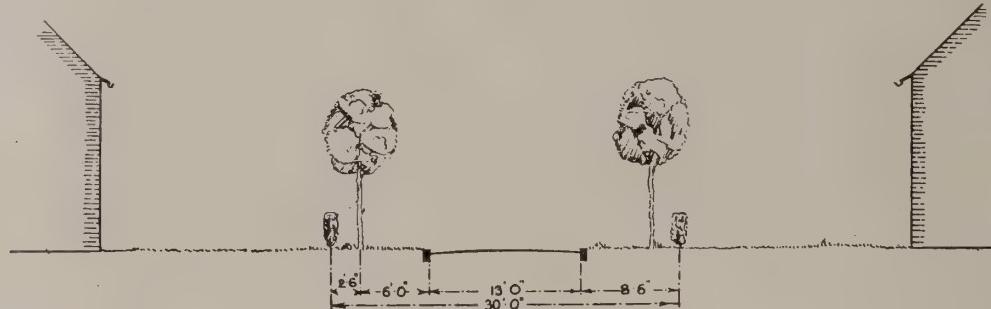
For simple footways or short roads round quadrangles, greens, or open spaces of limited extent, where vehicles need not pass one another, a width of 8 feet will often be sufficient.



TYPE NO. 1.

Type No. 2.

For short residential roads not intended for through traffic, but serving more houses than No. 1, the carriageway should be at least 13 feet wide, to allow for two vehicles to pass going slowly. The remainder of the width may be occupied by footways or by grass margins, with trees planted well back from the road to allow for future widening or the addition of footways. The width between the fences for this type of road should be about 30 feet.



TYPE NO. 2.

Type No. 3.

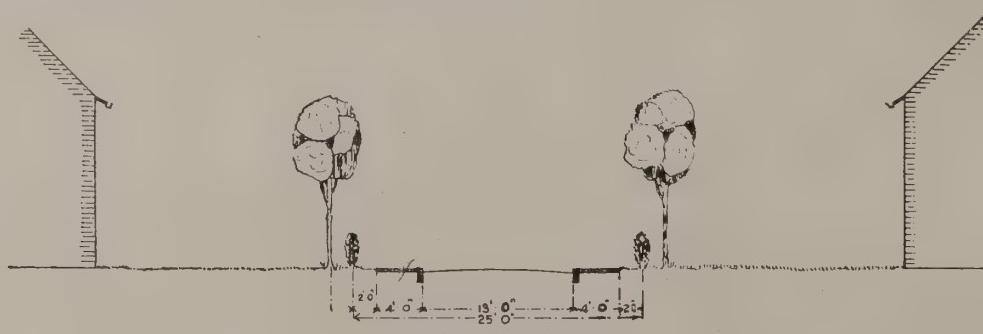
By increasing the width between the fences to 33 feet and curtailing the grass margins, a 4 ft. paved footway can be provided on each side of such a road as No. 2.



TYPE NO. 3.

Type No. 4.

The 4 ft. paved footway can, if desired, be placed immediately adjoining the kerb, a 2 ft. gravel or grass margin being left on each side of the road to allow for the natural growth of the hedges.



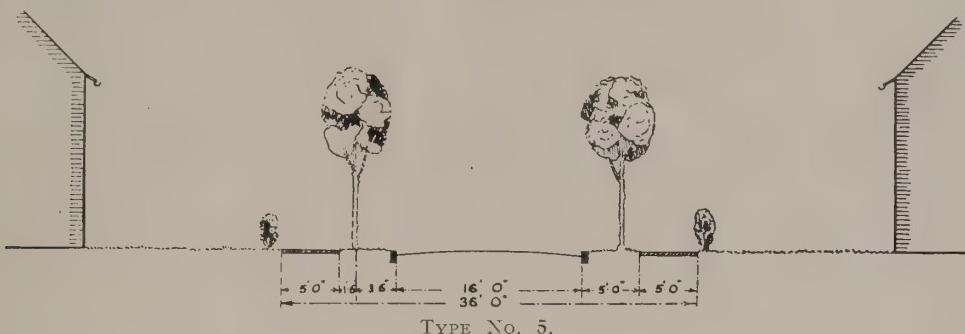
TYPE NO. 4.

With types Nos. 1 to 4, unless cross roads exist, turning spaces should be provided at distances not exceeding 450 feet apart.

It is difficult to prescribe any exact limit of length for the above roads, owing to different circumstances. But as a guide, it may be said that, where such road is not a through road, the length should generally be limited to about 450 feet. Where the road forms a loop or crescent or has houses on one side only, a greater length than this would not be objectionable in many cases.

Type No. 5.

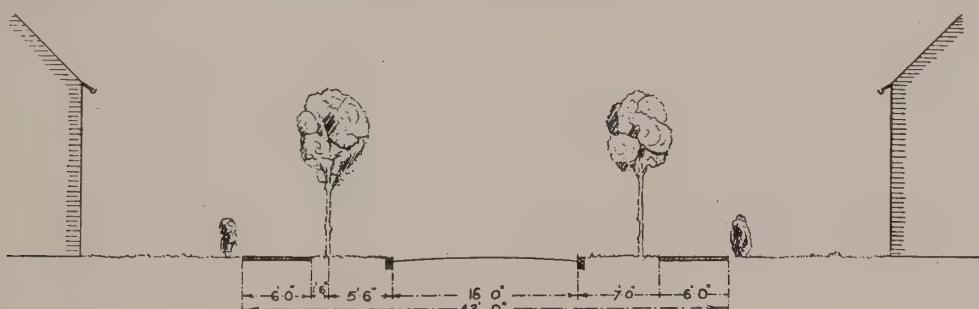
For longer residential or through roads a carriageway at least 16 feet wide should generally be provided; the remaining space on each side may be divided between grass or gravel margins and paved footways, giving a total width of 36 feet.



TYPE NO. 5.

Type No. 6.

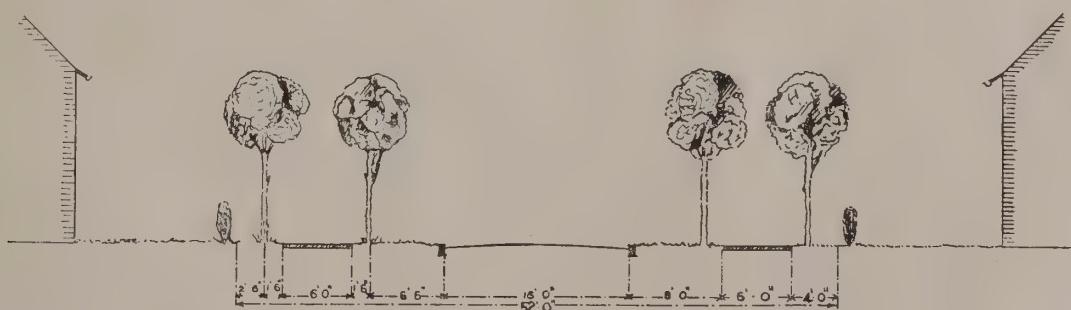
It will sometimes be desirable to leave a greater total width of road without increasing the width of carriageway. In this case the trees on each side may be well set back to allow for future widening, and a paved footway can be provided next to the boundary fences.



TYPE NO. 6.

Type No. 7.

Where space permits, a very effective treatment for a road, or part of a road, can be secured by the planting of trees on each side of the footways, but, as will be seen from the illustration, this involves a total width of about 52 feet.

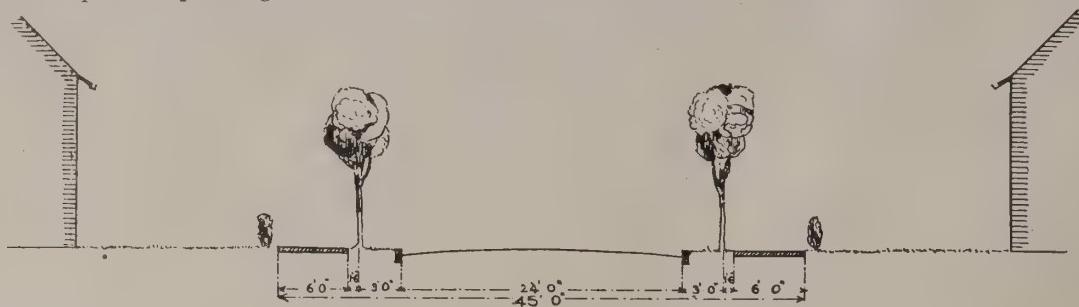


TYPE NO. 7.

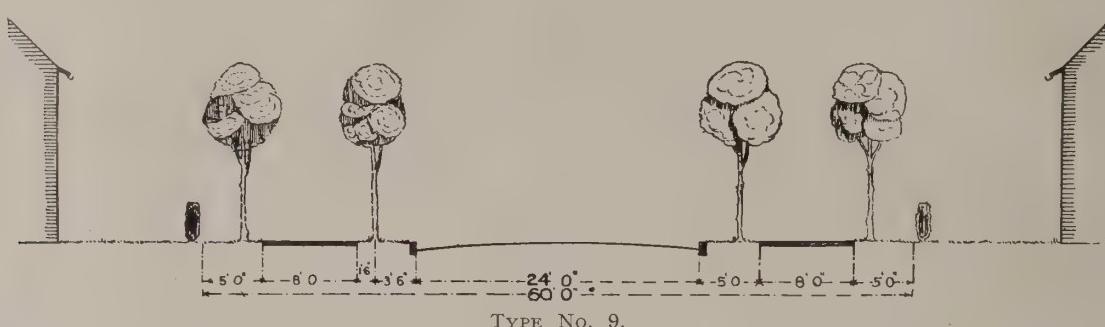
With carriageways 16 feet wide, turning spaces should be provided at intervals not exceeding 450 feet apart, except where cross roads serve the purpose. Seeing that two vehicles going quickly can safely pass on such a road, no definite limit of length need be suggested.

Type No. 8.

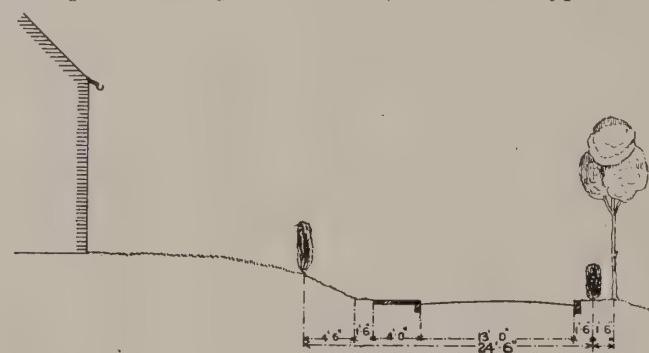
For through roads of greater importance, where the traffic is likely to be sufficient to require three lines of vehicles to pass at one time, the carriageway should be 24 feet wide; to allow for footways 6 feet wide and space for planting trees, a total width of 45 feet is desirable.

**Type No. 9.**

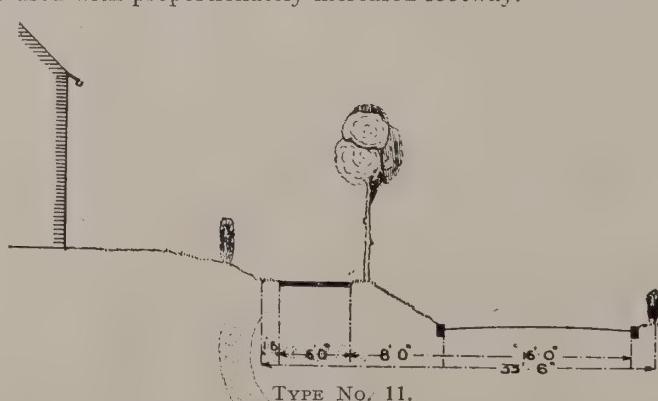
A double avenue arrangement similar to No. 7 may be useful also for this class of road, a total width of about 60 feet being required.

**Type No. 10.**

For hill-sides or steep slopes, roads of special character may be needed, having houses, and consequently needing a footway, on the higher side only. In this case excavation may be saved if the footway is placed above the level of the road. In such circumstances the length of a road with carriageway of 13 feet might be somewhat greater than given above. (See notes to Types Nos. 1 to 4.)

**Type No. 11.**

In circumstances similar to the last described, for longer or more important roads a carriageway 16 feet wide should be used with proportionately increased footway.



Cross sections applicable to arterial roads and parkways are not included, although it is recognised that these may need to be provided for in areas developed under the general housing proposals. In those cases, however, they would be dealt with separately, and the cost of their provision would not be chargeable to the housing schemes.

Road Construction—Residential Roads.

It is recognised that roads which are to be used as highways for general traffic should be substantially constructed, in view of the wear and tear to which they are likely to be subjected. The following notes, therefore, refer almost entirely to roads on which heavy traffic is not to be anticipated.

It is not possible to lay down hard and fast rules as to actual forms of road construction. Local circumstances as to subsoil and position, local materials and even local custom must be taken into consideration.

The following points, however, should be considered :—

- (a) Carriageways should be reduced in width where their length and the planning of the area sufficiently secure the absence of through traffic, or where traffic is otherwise limited.
- (b) Such carriageways should generally be constructed with a foundation of rubble or hard core, of which a thickness of 9 inches should usually suffice, except in cases where the soil is of a clayey nature, in which case a layer of ashes or clinker should be provided thereunder. The surface of the carriageway should be finished with either—
 - (i) 3 inches of tar macadam, or
 - (ii) 4 inches of macadam, or
 - (iii) 6 inches of gravel, flints or other approved material.
- (c) Where suitable refuse-destructive clinker is available, the use of this for road foundations should be considered.
- (d) Kerbing and channelling should be reduced to the minimum, or in some cases omitted altogether.
- (e) Footways on quite short roads may be omitted on one or both sides, or be greatly reduced in width.
- (f) Footways may be constructed of 4 inches of rubble, clinker or hard-core foundation, paved with a strip of natural or artificial stone paving, hard brick paving, or of $2\frac{1}{2}$ inches of tar macadam, to a width of about 4 feet, and be finished for the remainder of the width with a layer of 2 to 3 inches of clean binding gravel, or with a grass margin, with a light kerb or edging.

Considerable economy can be secured if drains, sewers, water and gas pipes and electric-light mains, with the necessary house connections up to the boundary of the street, are laid in before the surface of the carriageway and footways is finally completed.



APPENDIX III.

DRAINAGE ARRANGEMENTS.

1. It is necessary to consider methods of drainage already in force in a district, when laying out sites or planning the houses, since arrangements which may be desirable or economical with one method may not prove to be so with another. For example, where there is a combined system which takes rain-water and sewage together, part of the advantage on the ground of economy of keeping all the apartments and fittings which need foul-water connections on one side of the house would disappear, as drains would in any case be required on both sides and could be used for such connections where there is a joint system. The use of what is known as sectional drainage would also affect the lay-out of the houses. An additional set-back of the frontage from the road, which might be justifiable in spite of longer connections to sewers if only one set of such branches were required for twelve or fourteen cottages, might be a serious additional expense if connections to sewer and surface-water drain had to be provided for every house.

2. Certain possible economies in construction should also be considered in connection with the drainage arrangements. Sewers are sometimes required to be laid in, or surrounded by, concrete ; this process adds considerably to the cost and should be adopted only where circumstances render it necessary. The use of manholes except at points where there is real occasion for them involves needless expense. In the case of wide roads where frequent connections would have to be cut across the road, a subsidiary sewer of smaller size and shallower depth, connecting with the main sewer at some convenient point, may prove to be economical where for reasons of level the main sewer has to be laid at a considerable depth.

House Drainage.

3. Considerable economy could be effected, in connection with the drainage of small dwellings, by the general adoption of the system of the common drain or sectional drainage. This consists of using a common drain to collect the drainage from a number of houses and to deliver at one point into the main sewer, instead of requiring each house to have its drainage system separately connected. The latter system involves separate disconnecting traps, manholes, and ventilating arrangements for each house, with a separate connection cut across the road to the sewer. Where there is a duplicate system, two connections, one to the sewer and the other to the rain-water drain, have to be provided for each house. The cost of these numerous connections is increased where the roads are wide, or where the houses are set back from the road in a manner which for other reasons is most desirable. The saving in cost by the adoption of the common drain is substantial if only the works within the curtilage of the houses themselves are considered, but if the cost of cutting up the crust of the roadway after it is made, and of making good the damage resulting from settlement and reinstatement of such connections, is also taken into account, the economy which may be effected is very considerable. The adoption of this system has undoubtedly been checked owing to the legal position, which is liable to throw on the local authority the responsibility for maintaining the common drain. This objection, however, largely disappears in the case of municipal housing schemes, in which case the local authority is at the same time the owner of the property.

There can be no doubt that in certain cases, owing to the level of the land, for example, or to the short length of a road, the extension of a common drain slightly beyond the general limits that might be fixed would enable a sewer in a subsidiary road to be dispensed with altogether. It seems, therefore, undesirable to make too rigid rules as to the number of houses which may be drained into a common drain, but, as a general rule, the number should not exceed fourteen houses, exceptions being permitted only in cases where substantial convenience or economy would result.

4. There must always be provided in the roadway a drain to carry off the surface-water. Where there is a combined system and the surface-water and sewage are both carried in the same pipe, the economy above suggested due to the extension of a common drain would not so frequently result, as the road drain would be required in any case for the surface-water. The question as to whether there should be a double or a single system frequently has to be determined on account of factors other than those of economy, but the expenses entailed in development are considerable, and should be taken into account in cases in which a double system is adopted to secure economy in sewage treatment. Where, however, the double system is adopted, the common rain-water drain is economical for the same reasons as the common soil drain.

5. In addition to the economies which result from the combined drain, the actual drainage from each house may be considerably simplified. An excessive number of manholes is sometimes required in places where rodding eyes would answer all purposes ; also the collection of the branches from bath and sink gullies into the branch from the soil drain will save length in branch drains and reduce the number of connections with the common drains ; moreover, a useful flush is provided for the soil drain by this means.

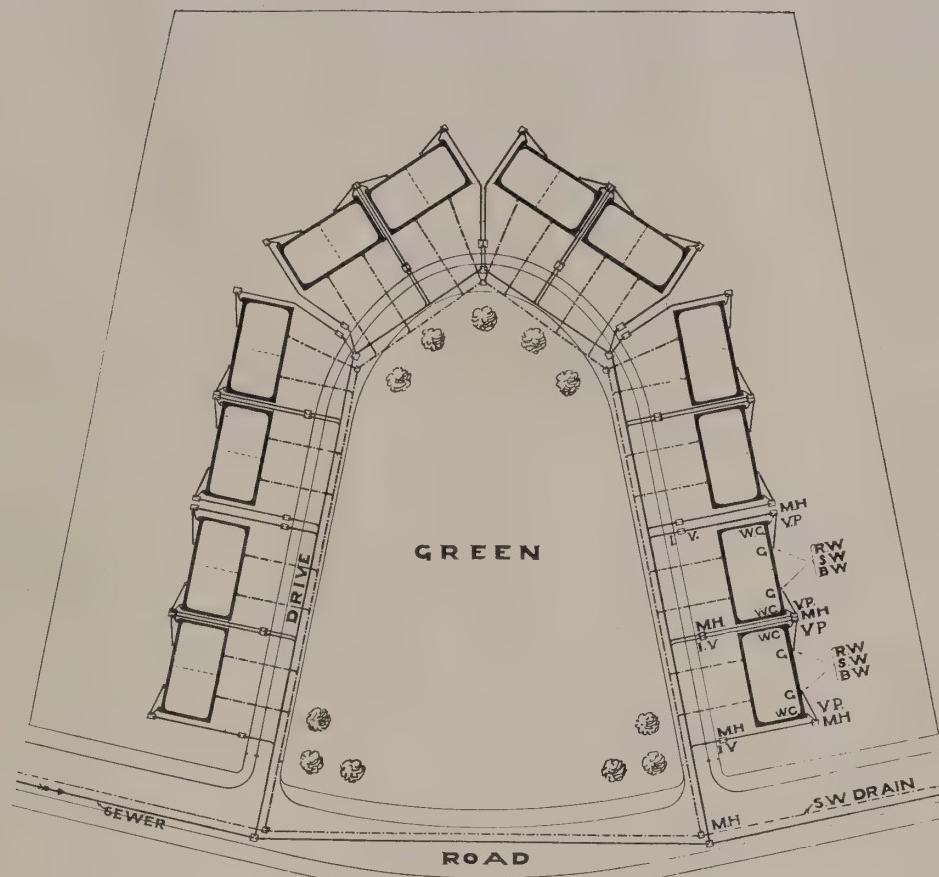


ILLUSTRATION No. 1.

Method of drainage as carried out where separate connections to sewer and surface-water drain are required for each house.

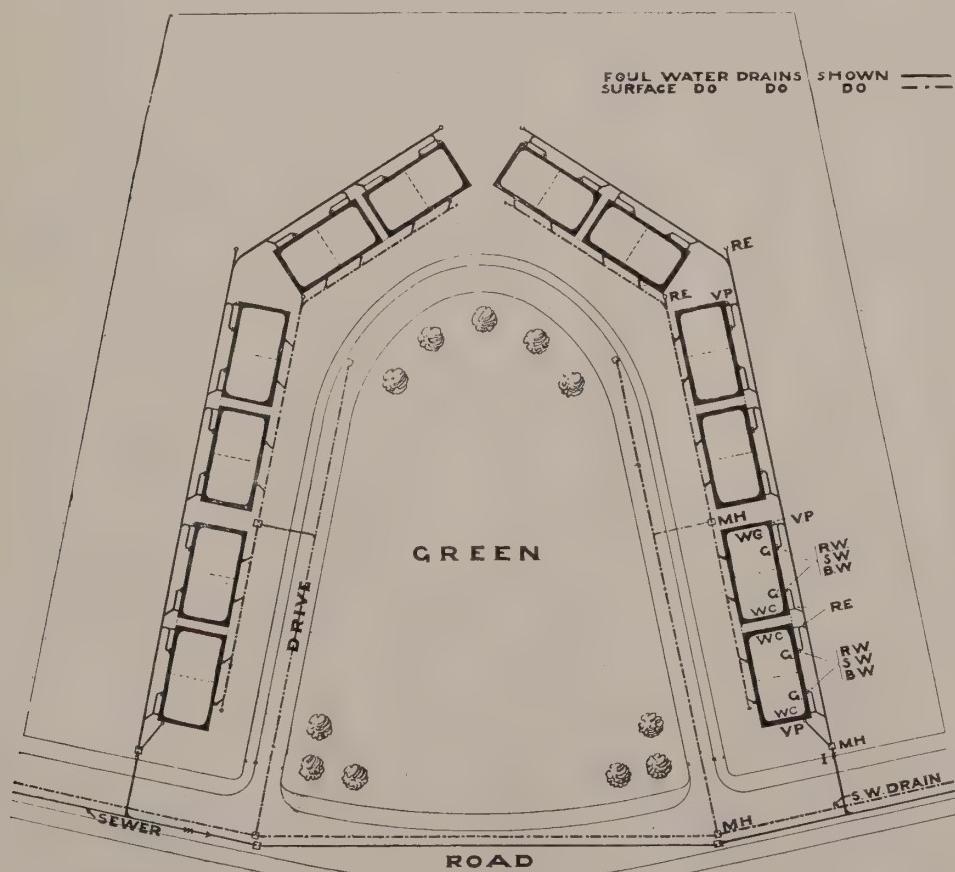


ILLUSTRATION No. 2.

Suggested method of sectional drainage.

6. Illustrations Nos. 1 and 2 show a particular example of the two systems of drainage—No. 1 as carried out with separate connections to sewer and surface-water drains for each house and No. 2 as carried out under the proposed sectional system with a common drain. The saving of expenditure, not only in manholes, etc., but in actual length of pipes required is apparent.

7. The following requirements should be observed in connection with the sectional system of drainage :—

- (i) One connection to the sewer to serve a section generally not exceeding 14 dwellings.
- (ii) An intercepting trap and manhole to be placed on the common drain, within the section drained as near as convenient to the junction of the sewer.
- (iii) The system to be ventilated in the following manner :—
 - (a) A fresh air inlet or vent pipe to be placed at the manhole containing the intercepting trap.
 - (b) At the head of each common drain.
 - (c) Each separate block of dwellings to have a vent pipe at or near the highest point of the common drain adjoining ; the vent to be carried up clear of the eaves of the building.
- Note.*—Where blocks of dwellings have w.c.'s on the first floor connected to soil pipes, the soil pipes should be carried up as vent pipes in the usual way ; in that case the vent pipes previously mentioned for each separate block could be omitted.
- (iv) A manhole to be provided where two common drains form a junction.
- (v) Inspection chambers or rodding eyes to be so placed that no length of drain exceeding 100 feet in length is without means of clearing or examination. Rodding eyes to be provided also where a change in the direction of the drain, or a branch connection, renders this desirable.
- (vi) All pipe connections to be by oblique bends and easy curves.
- (vii) All connections from the dwelling to be brought into the w.c. branch drain (as near the buildings as practicable) so that as few connections as possible are required to the common drain

APPENDIX IV.

HOUSES.

1. Competent architects should be employed to plan and design the houses to be erected. These will be in possession of the information embodied in the Building Construction Committee's Report and the Reports of the Women's Housing Sub-Committee referred to in Appendix XI., as well as that acquired by their own experience, and they should be acquainted with the mode of life and requirements of the people for whom housing provision is to be made.

2. Economy in plan and simplicity of design and construction may, therefore, be confidently expected, but the Board will require *full* consideration to be given to the following :—

1. Aspect.

3. It is useless to adopt a uniform plan for varieties of aspect. The houses should be designed to provide the sunniest aspect to the living rooms and the majority of the bedrooms.

In the case of a northerly aspect to the front of the simplest form of cottage, the living-room should generally extend through the whole depth of the building, with windows at both ends to secure sunlight from the back of the house. Houses with northerly aspects to the front will generally require longer site frontages than those with a southerly aspect.

2. Class of Houses.

4. The self-contained two-storey cottage type should be principally adopted.

There does not generally appear to be any justification for the claim of economy in the construction of tenements or two-storey flats as compared with two-storey cottages.

Exceptional circumstances or special requirements may justify one or other of these alternative methods or one-storey bungalows.

3. Accommodation in Urban Districts.

5. The present need is for houses with at least three bedrooms. Those with two bedrooms already exist in large numbers.

Class A.

The most general class of house should contain living-room, scullery, larder, fuel store, w.c., bath in separate chamber, and three bedrooms.

The desirable sizes for the different rooms must depend to a certain extent on their arrangement, and on the exigencies of planning, owing to which it may not be possible to secure that every part of a house shall be of exactly the size mentioned. The following, however, may be taken as the minimum sizes which the Board consider desirable :—

Living-room : 180 square feet.

Scullery : 80 square feet. *Note*.—This may be reduced slightly where the washing is provided for in the bathroom or in a wash-house.

Larder : According to circumstances and other provision that may be made for storage ; usually from 12 to 16 square feet for urban or suburban areas.

Coal store : To hold at least one ton of coal. Not less than 15 square feet is desirable for this purpose.

No. 1 bedroom : 150 square feet.

No. 2 bedroom : 100 square feet.

No. 3 bedroom : 65 square feet. (This should be increased wherever possible.)

It is desirable to make provision for dresser, where customary, plate rack, draining board to sink, linen cupboard, wardrobe cupboards, and adequate shelving.

Note.—In many districts there is a marked tendency to remove cooking from the living-room to the scullery. This will involve some extra space in the scullery for cupboard and small table.

Class B.

This class comprises accommodation of approximately the same dimensions as that provided in Class A, with the addition of a parlour of not less than 120 square feet.

If only three bedrooms are provided, they should be increased in size proportionately over the dimensions specified in Class A. Where four bedrooms are provided, three may be as described for Class A, and the fourth should be from 70 to 100 square feet.

6. *Plans*.—Plan suggestions embodying the requirements for these two different classes for both northerly and southerly aspects are annexed.

7. *Height of Rooms*.—The height of the ground-floor rooms should be 8 ft., and the upper floor should average 8 ft. in height. If sloping ceilings are adopted, proper headroom must be provided for furniture.

4. Class of Cottages.

8. It will be convenient if the following division of cottages into classes is adhered to in schemes for submission to the Board.

	<i>If with</i>	<i>If with</i>
	2 Bedrooms.	4 Bedrooms.
Class A—Living-room, scullery and three bedrooms	.. A2	.. A4
Class B—Parlour, living-room, scullery and three bedrooms	B2 ..	B4

5. Accommodation in Rural Districts.

9. It is desirable that cottages in rural areas should be linked up with existing villages, so that the occupants may enjoy the amenities and services possible in the latter rather than be scattered as separate units on the country side.

The main provision of accommodation should be the same as in urban districts, with about double the larder area and the addition of the necessary separate out-buildings for closet and the storage of fuel and garden tools and produce.

6. Design and Construction.

10. It is of the greatest importance that simplicity in design should be carefully studied, and no features which are merely decorative should be introduced. Economy in maintenance should be considered in conjunction with capital cost. All materials employed should be of a durable kind and of a good quality. Too much stress cannot be laid on the importance of securing good workmanship.

11. *Materials.*—Suitable materials that can be obtained within a reasonable distance of the locality of the intended buildings should be employed as largely as possible, instead of importing them from a distance.

12. *Brick Walls.*—Brick walls should preferably be 11 in. cavity walls without special provision for air currents through the cavity. The porosity of brickwork and its joints is sufficient for the necessary change of air and if the cavity is ventilated its usefulness as a non-conductor of heat or cold is destroyed.

In most localities a 9 in. solid brick wall without external protection will not be weatherproof, and in some exposed situations special precautions will be necessary even with 11 in. cavity walls. The same considerations with regard to exposed situations also apply to concrete walls. In some cases, 9 in. solid walls protected by rough cast may be found adequate and, at the same time, cheaper than hollow walls. In these matters, local authorities should be guided by local conditions.

13. *Concrete Walls.*—If the walls are intended to be constructed in concrete they should be built with a continuous cavity and precautions taken against condensation of moisture on the inner face. A suitable wall would have a 4 in. inner face, a 3 in. outer face, and a 2 in. cavity.

14. *Metal Lathing and Cement.*—Construction of steel or wood covered with metal lathing and cement is not desirable.

This objection does not apply to reinforced concrete construction where all the metal is encased in concrete and protected from rust, but this form of construction has hitherto proved unduly expensive for cottages.

15. *Stone Walls.*—When transit difficulties and scarcity of bricks on the one hand, and available quarries and mason labour on the other hand, render the use of stone advisable and economical, the usual customs of the locality in regard to stone building may be followed. Bath and similar stone ashlar, machine cut to $4\frac{1}{2}$ in. beds and to courses equal to two or three built brick courses, would be suitable in stone districts for the outer part of cavity walls, the internal part being of brick.

16. *Other Materials and Methods of Construction.*—Any other materials and methods of construction proposed will be considered on their merits.

17. *Ventilating Bricks.*—All bricks built into walls for ventilating purposes should be covered on the back with coarse perforated zinc or fine galvanised wire mesh to prevent the entry of vermin, and proper casing to the flue must be provided where it crosses the wall cavity.

18. *Roofs.*—Broken roofs and dormers should be avoided as far as possible.

The coverings should be tiles or slates. If substitutes are proposed they should be of proved suitability and durability. Thin slates are not desirable.

Tile roofs should generally not be at a less pitch than 45 degrees, nor slates than 30 degrees, above the horizontal.

The adoption of flat roofs of reinforced concrete or other approved construction may be found desirable in special circumstances.

Roof construction of light steel inaccessible for painting, or not protected from rust, cannot be approved.

19. *Plaster.*—The internal plastering should possess the quality of hardness and be absorbent of condensed moisture.

20. *Floors.*—The building in of timber wall plates to carry the joists of upper floors should be avoided in external solid walls.

The ground floors should generally be of solid construction, but if formed with wooden joists, separate sleeper walls or piers are desired, with the plates and wall ends of the joists kept clear of the main walls.

The floors of living-rooms and parlours, if on the solid and of wood, should be laid on bitumen.

21. *Stairs.*—The treads should not be less than 9 in. on the solid, and the rise of each step not more than $7\frac{1}{2}$ in. Winders should be avoided, but if necessary they should be at the bottom of the flight and not at the top. Hand rails should be provided.

22. *Fireplace Openings.*—The widths of fireplace openings should not be less than:—

- 3 ft. for cooking ranges.
- 1 ft. 6 in. for parlours.
- 1 ft. $1\frac{1}{2}$ in. for bedrooms.

Special ranges would require special openings.

23. *Windows.*—The height of window sills from the floor for living rooms and bedrooms should be about 2 ft. 6 in., and the window area not less than one-tenth of the floor area, with adequate opening parts.

For sculleries 3 ft. 6 in. so that sink taps may be fixed clear of the windows.

For w.c.s 4 ft. 6 in., and if possible not behind the seat.

For larders fixed sashes, the panes of which are filled with perforated zinc, should be used.

24. *Water Service.*—Proper precautions must be taken to protect cisterns and pipes from frost.

APPENDIX V.

Summary of steps to be taken.

1. In order to facilitate the preparation and submission of schemes to the Board, it is desirable that they should be prepared in consultation with the Housing Commissioner, and submitted to the Board in stages. It is not intended that Local Authorities should defer the submission of their schemes to the Board until they have been completed in every detail.

The normal procedure of a Local Authority in preparing a scheme.

2. (i) The Council will determine the total number of houses which they consider are needed and can be erected during the next two years, and communicate these facts to the Housing Commissioner, if they have not already furnished them to the Board. They should also, as far as possible, indicate the class or classes of accommodation required.

(ii) The Council will select a site or sites for the erection of the houses, and will negotiate provisionally for their purchase. They will confer with the Housing Commissioner with a view to obtaining his general approval of the proposal. In this connection reference may be made to paragraph 9 of the Board's Circular of 6th February, 1919, which is printed in Appendix IX.

(iii) Application will be made to the Board on Form D. 48 for approval of the site and for sanction to any loan necessary for its purchase, or for consent to the appropriation of the land (see 3 (a) on page 32). See also note below.*

(iv) On receipt of the Board's approval of the site and sanction to the loan, the Council will conclude the contract for the purchase and execute the necessary deeds, and will raise the loan.

(v) They will then prepare the lay-out proposals and will submit them to the Housing Commissioner. On obtaining his general approval, they will prepare estimates of the necessary street works and sewers.

(vi) Application will then be made to the Board on Form D. 49 for approval to the general lay-out, and for sanction to a loan for street and sewerage works, etc. (see 3 (b) on page 32). When the loan is sanctioned, the Council will raise the authorised amount in instalments as occasion demands.

(vii) When the Board have approved the general lay-out, the Council will submit preliminary house plans and the detailed scheme of development of the whole or of a part of the estate to the Housing Commissioner for his general approval.

(viii) They will then submit to the Board complete drawings of the houses for approval on Form D. 50 (see 3 (c) on page 32).

(ix) When the Board have approved the house plans, the Council will obtain tenders for the erection of the houses.

(x) Application will be made to the Board (see 3 (d) on page 32) for sanction to a loan for the erection of the houses, based on figures of a provisionally accepted contract or tender.

(xi) On receipt of the Board's sanction, the Council will at once proceed with the erection of the houses.

(xii) When the first section of the houses is nearing completion the Council will submit to the Board a statement of estimated receipts and expenditure (Form D. 52—Appendix VII), based as nearly as possible on the ascertained cost of the scheme and on the rents which the Council propose to charge.

* NOTE.—Clause 9 of the Housing, Town Planning, &c., Bill, at present before Parliament, provides that, where a Compulsory Purchase Order has been confirmed, the local authority may, at any time after notice to treat has been served, and after giving not less than 14 days' notice to the owner and occupier of the land, enter on and take possession of the land.

Stages in the submission of schemes to the Board.

3. It will be seen from paragraph 2 that schemes should be submitted to the Board in the following stages :—

- (a) Application for approval of the site and for sanction to any loan necessary for its purchase, or for consent to its appropriation. Form D. 48.
- (b) Application for approval of the lay-out, and sanction to any loans necessary for street and sewerage works, etc. Forms D. 49 and D. 51.
- (c) Application for approval of the house plans. Form D. 50.
- (d) Application for sanction to a loan for the erection of the houses.
- (e) Submission of a statement of estimated receipts and expenditure. Form D. 52.

The Forms of Application (D. 48, D. 49, D. 50 and D. 51) are printed in Appendix VI and the Statement (D. 52) in Appendix VII. These Forms may be obtained by local authorities on application to the Board.

4. While it is very desirable that the applications to the Board should be made in the distinct stages set out above, there is no reason why the Council should not provisionally consider points properly arising at later stages, or why, in simple schemes, more than one stage should not be submitted at the same time. In larger schemes, however, it will generally be found more expeditious to submit each stage separately.

NOTE 1.—In order to secure the utmost expedition in the consideration of schemes by the Board, they should be submitted to them through the Housing Commissioner. It is desired, therefore, that local authorities will direct the submission of schemes (at each stage) to the Housing Commissioner who will, without delay, transmit them to the Board for consideration and approval.

NOTE 2.—Schemes already submitted to the Board before the date of this Manual should not be re-submitted to the Housing Commissioner. All subsequent stages in regard to such schemes will, however, be submitted in the manner indicated above.

APPENDIX VI.**FORMS TO BE USED BY LOCAL AUTHORITIES.**

For use at L. G. B. only.

HOUSING OF THE WORKING CLASSES ACTS.

Area.....
No. of Scheme.....

SITE PROPOSALS.

Name of Local Authority { Borough
Urban District
Rural District } Council

Particulars are to be given on a separate form in respect of each site. Particulars in respect of proposals for the lay out of a site (street works, sewers, etc.) and for house plans and building are to be given on the separate forms prescribed for those purposes.

FOR INSTRUCTIONS AS TO DOCUMENTS, PLANS, ETC., TO BE FORWARDED WITH THIS APPLICATION, SEE THE BACK OF THIS FORM.

1. Situation of Site (in the case of a Rural District give name of parish)
2. Area of site (in acres and decimals of acre)
3. Number of houses to be built on site (a) immediately
(b) eventually
4. What is the tenure of the land ?
5. Are there any covenants restricting its use (if so give particulars) ?
.....
6. Have provisional arrangements been made for the acquisition of the site ?
7. If site is to be purchased state :—
(a) Purchase price.....
(b) Estimated legal and other costs.....
(c) Total cost.....
(d) Cost per acre.....
8. If site is to be leased state (a) Term..... (b) Rent £.....
9. If site was acquired for purposes other than housing of the working classes and is proposed to be appropriated state :—
(a) Purpose for which it was acquired.....
(b) Act (if any) under which acquired.....
(c) Date of acquisition.....
(d) Amount of any loan sanctioned in respect of land.....
(e) Date of such sanction and (if possible) reference number of Board's letter forwarding sanction
.....
(f) Amount of such loan outstanding.....
10. Assessable Value of the District for the purposes of the rate on which the expenses under the Housing Acts are chargeable, £.....
11. Produce of a rate of 1d. in the £ on above assessable value, £.....
12. Population (a) at 1911 census..... (b) Now.....

[BACK OF D. 48.]

DOCUMENTS, etc., to accompany application for the Local Government Board's approval of a site for a housing scheme in respect of which financial assistance is sought. Care should be taken to comply with these instructions completely so far as they are applicable to the particular case.

The fact that the particulars and plans enumerated below are enclosed should be indicated by a cross in the margin opposite the appropriate items.

1. Copy of Resolution of Council directing application for sanction to a loan where this is desired. The resolution should specify the amount to be borrowed ; if the land is to be used partly for other purposes besides housing, the resolution should specify these purposes and the cost should be apportioned between them.

2. Copy of any provisional agreement for the purchase or lease of the land.

3. Where land already vested in the Council is proposed to be appropriated :—

(a) *Boroughs and Urban Districts.*—(i) Copy of the resolution of the Council applying to the Board for consent to the appropriation of the site under Section 57 (3) of the Housing of the Working Classes Act, 1890 ; (ii) Plan *in duplicate* on opaque linen of the land on scale 1-2500, showing the exact boundaries of the land to be appropriated edged in colour, for the purpose of annexation to the Board's consent.

(b) *Rural Districts.*—Copy of the consent of the County Council under Section 57 (3) of the Housing of the Working Classes Act, 1890, to the appropriation of the land.

4. A map of the district (or in the case of a Rural District of the contributory place) showing in red the area proposed to be used. The map (which must be an ordnance map if procurable) should be on the scale of 6 inches to the mile and should show the following :—

(a) Any important means of access, through roads, railway stations, tram or bus routes, the location of any existing or anticipated industrial areas or other centres of employment, and any special facilities affecting the choice of site.

(b) The area of the site in acres and decimals of an acre.

(c) Such parts of adjacent districts as may be necessary to show the relation of the site to any town or urban centre, or, in the case of rural sites, the relation to the village affecting the choice of site.

5. A statement with regard to the site indicating :—

(a) its accessibility,

(b) the nature of the subsoil,

(c) the facilities for water supply,

(d) sewerage and sewage disposal,

(e) lighting,

(f) any other relevant particulars.

Signed.....

Date.....19

Clerk to the Local Authority.

HOUSING OF THE WORKING CLASSES ACTS.

For use at the L. G. B. only.

Area.....

No. of Scheme.....

**PROPOSALS FOR
GENERAL LAY-OUT, STREETS, SEWERS, ETC.**

Name of the Local Authority Borough
Urban District
Rural District Council.

If Rural District, state Parish.....

Particulars are to be given on a separate form in respect of each site. Particulars in respect of the acquisition or appropriation of land and for house plans and building are to be given on the separate forms prescribed for those purposes.

For instructions as to documents, plans, etc., to be forwarded with this application, see the back of this form.

Note.—In small schemes, in which no special lay-out proposals are involved, it will not be necessary to supply particulars on this Form unless streets and sewers are to be constructed.

1. Situation of site

2. (a) Total area of site.....

(b) Area of roads.....

(c) Area of open spaces.....

(d) Area of land reserved for other purposes

(e) Total of (b) (c) and (d)

(f) Net area for building sites (difference between (a) and (e)).....

Note.—Areas to be expressed in acres and decimals of an acre.

3. Number of houses proposed to be erected on the land at 2 (f) above.

4. Estimated cost of street works £

5. Estimated cost of sewerage and sewage disposal works £

6. Estimated cost of other works of development (if any) £

(See Note to B. at the back.)

D. 49.

[See back.]

[BACK OF D. 49.]

DOCUMENTS, PLANS, etc., required by the Local Government Board in connection with the lay-out, streets and sewers, etc., of a housing scheme in respect of which financial assistance is sought. Care should be taken to comply with these instructions completely so far as they are applicable to the particular case.

The fact that the particulars and plans enumerated below are enclosed should be indicated by a cross in the margin opposite the appropriate items.

A. A general lay-out plan of the site *in duplicate* to the scale of 1/2,500 (25 inches to the mile), for which the Ordnance Survey sheets, corrected to date so far as necessary, or true-to-scale photo prints on opaque cloth, may be used. In the latter case the prints should shew prominent features shewn on the Ordnance Survey sheets which contain the area to be planned. The plan should shew:—

- (a) In the case of sites on undulating land, the contours, by means of light dotted lines, shewing the levels at from 2 to 5 feet apart in height, according to the nature of the ground.
- (b) The lines and widths of the roads which it is proposed shall be made as part of the scheme. Each road should be given a distinct number on the plan to facilitate reference.
- (c) In the case of large schemes, in the first instance, the proposed main roads only need be shewn, the minor roads being reserved till the detailed development plan on the scale of 1/500 is prepared at the next stage.
- (d) The connection of the proposed roads with existing roads or with roads which may be required for the development of adjacent lands.
- (e) Any alteration of existing streets.
- (f) Any sites reserved for open spaces or allotments, for schools, shops, public or other special buildings, and for larger houses.
- (g) The general disposition of the proposed houses. In each case an indication should be given of the type of house proposed. This may be done by way of reference to one of the Board's types. In all cases the frontages of the houses should be indicated.
- (h) The lines of all sewers, distinguishing the existing from the proposed sewers.
- (i) Any railway station, tram or bus routes, centres of employment, schools, open spaces, groups of shops, or other places of general resort in the immediate neighbourhood of the site, influencing the lay-out of the roads.

B. A copy of the resolution of the Council applying for the Board's sanction to a loan for street works and sewers, distinguishing the amounts required for each purpose.

Note.—It should be remembered that loans can only be sanctioned under the Housing Acts for such street and sewerage works as can be properly charged to the Housing scheme. Applications for other street and sewerage works should be made separately under the Public Health Act, 1875.

C. The Board's Form D.51 should be completed with regard to STREETS and SEWERAGE WORKS.

Note.—The particulars in Form D.51 should be identified with the numbers of streets as shewn on the plan at A. above.

D. The following sections should be forwarded with Form D.51:—

- (a) Longitudinal sections of each street shewing the levels of the street and of the sewer, and identified by the number of the street on the plan at A. The horizontal scale should be the same as on that plan, and the vertical scale should be 10 feet to the inch.
- (b) Detail cross sections drawn to the scale of 4 feet to the inch of the streets similarly identified, shewing with dimensions the method in which the street is to be constructed and the thicknesses and nature of the materials to be used.

These sections must be on tracing linen or true-to-scale photo prints on opaque linen.

E. In cases where no public sewers are available full particulars of the method of disposal of sewage must be given with plans.

Signed

Date.....19

Clerk to the Local Authority.

For the use of the L. G. B. only.

HOUSING OF THE WORKING CLASSES ACTS.

Area.....

No. of Scheme.....

APPLICATION FOR APPROVAL OF HOUSE PLANS.

Name of the Local Authority.....
 { Borough
 Urban District } Council.
 Rural District

If Rural District, state parish.....

Particulars are to be given on a separate form in respect of each site. Particulars in respect of the acquisition or appropriation of land, or for lay-out, streets and sewers, or for the cost of building are to be given on the separate forms provided for the purpose. For instructions as to documents, &c., to be forwarded with this application, see back of this form.

Situation of the site

1. NUMBER OF HOUSES OF VARIOUS TYPES.

	Class A.		Class B.		Class B4.		Other Classes (specifying them).		
	Number	Estimated		Number	Estimated		Number	Estimated	
		cost	rent		cost	rent		cost	rent
End or semi-detached houses with frontage of building:-									
under 20 feet									
from 20 to 25 feet ..									
over 25 feet..									
Intermediate houses with frontage:-									
under 20 feet									
from 20 to 25 feet ..									
over 25 feet..									
Total number of houses in each column.									

2. In how many houses are provided (a) Bathrooms ?
 (b) Baths elsewhere ?
 (c) Hot-water supply ?
3. (a) Is water supply to be laid on to the houses ?
 (b) If not, state source of water supply.
4. Do the houses drain into a sewer ?
5. Materials to be used in the construction of—
 (a) External walls ;
 (b) Roofs.
6. Estimated total cost of the houses, exclusive of land, streets and sewers : £.....

[BACK OF D. 50.]

DOCUMENTS, PLANS, etc., required by the Local Government Board in connection with the approval of house plans for a housing scheme in respect of which financial assistance is sought. Care should be taken to comply with these instructions completely so far as applicable to the particular case.

The fact that the particulars and plans enumerated below are enclosed should be indicated by a cross in the margin opposite the appropriate items.

A. Detail plans *in duplicate* of the area, or in the case of large schemes, of parts of the area (which may be submitted from time to time with further copies of this Form as development proceeds), to the scale of 1/500. These plans may be prepared on the Ordnance Survey Sheets where these exist or true-to-scale photo prints on opaque cloth. These plans should show:—

- (a) The whole of the site and sufficient of the immediately surrounding land to indicate the relation of the development of the site or section of the site to that on the adjacent land. For undulating sites, the contours should be shown by means of light dotted lines, showing the levels at from 2 to 5 feet apart, according to the nature of the ground.
- (b) The correct lines of all new roads indicating the length and width of each and the intended apportionment of the width between carriageways, footways and margins. These should agree with any cross sections already submitted and approved. The roads should be identified with the same numbers as were allotted to them for reference in the 25-inch lay-out plan.
- (c) The lines and levels of the house drains, together with the lines and levels of the sewers and surface water drains, sufficiently to show clearly the system of drainage proposed.
- (d) Any sites or land intended for open spaces, for special buildings, or otherwise not intended to be used at once for the erection of workmen's houses, with the purposes for which they are reserved.
- (e) The proposed arrangement of the houses, gardens, and forecourts on the land, distinguishing the various types of houses, indicating their placing or grouping, the amount of space about the buildings, and the proposed means of access to the rear of the buildings.

B. Plans *in duplicate* of the proposed houses to the scale of 8 feet to 1 inch. The dimensions of the rooms should be shown and also the drainage arrangements.

C. Sections *in duplicate* of the proposed houses to the same scale. The height of the rooms should be dimensioned.

D. Elevations *in duplicate* of the proposed houses to the same scale.

*Note.—*All the above plans should be on tracing cloth or true-to-scale photo prints on opaque linen. They should bear the signature of the Clerk as indicating that they are submitted by the Council to the Board for their approval.

E. An outline specification of the work proposed.

Date..... 19 .. Signed
Clerk to the Local Authority.

HOUSING OF THE WORKING CLASSES ACTS.

For the use of the L.G.B. only.

Area.....
No. of Scheme.....**ESTIMATE OF STREET AND SEWERAGE WORKS.**Name of Local Authority $\left\{ \begin{array}{l} \text{Borough} \\ \text{Urban District} \\ \text{Rural District} \end{array} \right\}$ Council.

Particulars are to be given on a separate form in respect of each site.

Situation of Site (in case of a Rural District, give name of Parish)

What works, if any, are included in this estimate in respect of—

(a) Main roads ?

(b) Highways (other than main roads) repairable by the inhabitants at large ?

Will any works be superseded or abandoned in respect of which a loan is outstanding? If so, state—

(a) The date of sanction and amount of loan

(b) The cost of the works

(c) The debt outstanding in respect of the works.....

If the scheme involves the stopping up or diversion
of a public highway, and not merely the closing
of part of the width of the highway, state
whether proceedings have been taken to obtain
an Order of the Justices under Section 84 *et seq.*
of the Highway Act, 1835, and, in the case of a
rural parish, whether the consent of the Parish
Council or, if the Parish has not such a Council,
of the Parish Meeting, has also been given to
the proposal (*see* Sections 13 (1) and 19 (8) of
the Local Government Act, 1894)*Note.*—Loans can only be sanctioned under the Housing Acts for such street and sewerage works
as can properly be charged to the Housing Scheme. Applications for other street and sewerage
works should be made separately under the Public Health Act, 1875.**INSTRUCTIONS AS TO FILLING IN FORM.****CARRIAGeways.**—Give the thickness and kind of materials to be used (a) for the foundation and
(b) for the finishings.**FOOTWAYS.**—If to be flagged, mention (a) the kind of stone, (b) the thickness of the flags, and (c) the
foundation on which the flags are to be laid. Give similar information if the footways are to be
formed with tar-paving or other material.**KERBING AND CHANNELLING.**—Describe the material to be used and give the dimensions.**MISCELLANEOUS ITEMS OF STREET WORKS** (if any) should be included in sub-division IV. of
this form**SEWERS.**—Describe the pipes and method of jointing. Give particulars of manholes, gullies and sewer
ventilators.

I.—CARRIAGEWAYS.

No. of Street on Lay-out Plan.	Width of carriage- way in feet.	Length of carriage- way	Area of carriage- way in sq. yds.	Description of Work and Materials.	Price per sq. yd.	Amount. £ s. d.

II.—FOOTWAYS, INCLUDING GRAVEL AND GRASS VERGES.

No. of Street on Lay-out Plan.	Width in feet of footway including verge.	Length in feet.	Area in sq. yds. of footway including verge (if any).	Description of Work and Materials.	Price per sq. yd.	Amount. £ s. d.

III.—KERBING AND CHANNELLING.

IV.—MISCELLANEOUS ITEMS (IF ANY) OF STREET WORKS.

No. of Street on Lay-out Plan.	Description of Work and Materials.	Amount. £ s. d.
	Carried to Summary (VII., page 8)	

V.—SEWERS (SOIL AND SURFACE WATER).

VI.—MANHOLES, GULLIES AND VENTILATORS.

No. of Street on Lay-out Plan.	Description of Work.	Price.	Amount. £ s. d.
	Manholes with moveable covers, complete		
	Gullies, complete		
	Sewer Ventilators		
	Other Items		
	Carried to Summary (VIII., page 8)		

N.B.—Give total number and describe the manholes, gullies and ventilators.

VII.—SUMMARY (STREET WORKS).

		Amount. £ s. d.
Item I. Carriageways		
II. Footways		
III. Kerbing and Channelling		
IV. Miscellaneous Items		
Estimated cost of Street Works—Item 4, Form D. 49 .. .		

VIII.—SUMMARY (SEWERAGE WORKS).

		Amount. £ s. d.
Item V. Sewers		
VI. Manholes, gullies and ventilators		
Estimated cost of Sewerage Works, Item 5, Form D. 49 .. .		

Signed

Date.....19 .

Clerk to the Local Authority.

D. 51.

APPENDIX VII.

STATEMENT OF ESTIMATED ANNUAL RECEIPTS AND EXPENDITURE Properly apportioned to this Section of the Scheme.

This Appendix is inserted for the information of Local Authorities as to the probable form of financial statement which will be required, but it is subject to further consideration.

Site.....	Borough. Urban District. Rural District.
Section of Scheme } (1st, 2nd, etc.) }	

To be forwarded to the Local Government Board in connection with a Scheme for the erection of working-class dwellings under Part III of the Housing of the Working Classes Act, 1890.

Estimated Receipts.	£ s. d.	Estimated Expenditure.	£ s. d.
From Rents (see Table A.)	Loan charges (see Table C.)...
Less allowance for empties and losses	Rates (see Table D.)
	—	Taxes
Estimated net receipts from rents	Insurance
From other sources (if any) specifying them	Charge for water supply if borne by the Local Authority (see Table E.)
	Allowance for repairs and maintenance
	Supervision and collection of rents	...
Balance (Excess of Expenditure over Receipts).	Balance (Excess of Receipts over Ex- penditure)

Note :—Tables A. to E. below must be completed in all cases to which they are applicable.

Date.....19

Signed.....

Clerk to the Local Authority.

Table A.—RENTS.

Class of house.	Cost per house.	Proposed weekly rental per house.	Annual rental per house.	No. of houses.	Total annual rent.
Class A.					
Class B.					
Class					
Class					
Class					
Class					
	/				
					Total as in Main Statement ..

[BACK OF D. 52.]

Table B.—STATEMENT AS TO LAND.

	Acres and deci- mals of an acre.	Apportioned cost. £
Area of land comprised in previous sections of scheme (if any)		
Area of land comprised in section of scheme to which above statement relates ...		
Area of land remaining to be developed		
Total area of Site ...		

Table C.—LOAN CHARGES.

Annual sums (including principal and interest without deduction of Income Tax) required to repay on the annuity system loans for the capital expenditure *which is properly apportioned to the houses to which the main statement relates.*

Loans obtained from.....	Rate of Interest.	Annual annuity per £1, including sinking fund.	Annual Loan Charge.
(a) In respect of land, ... £..... for years ...			
(b) In respect of buildings, £..... for years ...			
(c) In respect of sewers and water supply ... £..... for years ...			
(d) In respect of street works £..... for years ...			
Total capital cost £			Total loan charges in Main Statement ...

Note :—The calculations should be made on the periods proposed for repayment by the Local Authority, not exceeding, however, 80 years for (a) above, 60 for (b), 30 for (c), or 20 for (d).

Table D.—RATES. (See also Table E.)

Class of house.	Annual R.V. per house.	Rates in £	Annual Rates per house.	No. of houses.	Total Rates.
Class A.					
Class B.					
Class					
Class					
Class					
Class					
Total in Main Statement					

Note :—If compounding applies, a separate statement should be annexed showing exactly how the amount of the rates is arrived at.

Table E.—WATER SUPPLY (if not already included in Table D).

Class of house.	Assessable Value for Water Rate.	Water Rate in £	Water Rate or charge per house.	No. of houses.	Total charge for water supply.
Class A.					
Class B.					
Class					
Class					
Class					
Class					
Total in Main Statement					

Date.....19

Signed.....

Clerk to the Local Authority.

APPENDIX VIII.

**Compulsory Purchase of Land for the purposes of Part III of the Housing of the Working Classes
Act, 1890.**

1. The statutory authority for the compulsory purchase of land for the purposes of *Part III schemes* is contained in Section 2 of the Housing, Town Planning, &c. Act, 1909, and the First Schedule of that Act. Paragraph (4) of that Schedule provides that the Order shall be made in the prescribed form, and paragraph (5) that the Order shall be published in the prescribed manner, and the Board prescribed the form of the Order and the manner of publication in The Housing &c. (Form of Compulsory Purchase Order, &c.) Order, 1911, dated 14th June, 1911. This Order has been published (price 1d.), No. 546 of the Statutory Rules and Orders, 1911.

2. When a Local Authority have made a Compulsory Purchase Order in accordance with the Act and the Board's Order referred to, and have published it in the prescribed manner, they will at once apply to the Board for confirmation of the Order.

3. Such application for confirmation of the Order must be accompanied by the following documents and particulars :—

- (a) The original Order sealed by the Council.
- (b) A copy of each of the newspapers in which the advertisements, required by Article II (1) of the Housing, &c. (Form of Compulsory Purchase Order, &c.) Order, 1911, were inserted.
- (c) A definite statement (after the expiration of one calendar month from the date of the second advertisement) that the requirements of Article II (4) of that Order have been complied with, together with a copy of the deposited plan referred to in that Article.
- (d) A definite statement that Article III (1) has been complied with, together with a copy of the notice given to the owners, lessees and occupiers of the land in question, and a statement showing the names of all the owners, lessees and occupiers to whom the notice was given, and the manner of service in each case.
- (e) A formal application by resolution of the Council for the Board's confirmation of the Order.

4. It is very desirable that, before making a Compulsory Purchase Order for the purpose of a scheme for which financial assistance is to be sought, the Local Authority should ascertain from the Housing Commissioner or the Board whether the land appears to be generally suitable for a housing scheme. As the Board have to decide judicially whether to confirm a Compulsory Purchase Order or not, when it comes before them formally, they cannot commit themselves in advance. Time and trouble may, however, be saved if Compulsory Purchase Orders are not made in respect of land which the Board could not regard as suitable for a housing scheme in respect of which financial assistance could be granted.

NOTE.—In connection with the compulsory purchase of land for purposes of *Part III. schemes*, local authorities should note clauses 9 and 10 of the Housing, Town Planning, etc., Bill which is at present before Parliament.

APPENDIX IX.

Circular of 6th February, 1919.

Circular.

County Councils.

Councils of Metropolitan Boroughs.

Town Councils.

District Councils.

LOCAL GOVERNMENT BOARD,

Whitehall, S.W. 1,

6th February, 1919.

HOUSING OF THE WORKING CLASSES.

Sir,

1. I am directed by the President of the Local Government Board to inform you that His Majesty's Government have reconsidered the terms of financial assistance previously promised to Local Authorities in connection with the provision of houses for the working classes at the present time. The Government desire that the partnership between the State and the Local Authorities should be such as to secure the rapid erection of the large number of houses needed to make good the existing shortage, and they believe that under the terms now proposed they will be able to rely upon the active support and energetic co-operation of the Local Authorities as a whole.

2. The Municipal Corporations Association and a number of individual Local Authorities in the representations which they have addressed to the Government in regard to the previous scheme have referred to the element of uncertainty as to the burden which might have to be borne by Local Authorities and have pressed for a declaration that in no case should the annual burden falling on the Local Authority exceed the produce of a rate of one penny in the £.

3. His Majesty's Government have been desirous of meeting these representations as far as practicable, and they have now approved the adoption of a scheme under which the burden on Local Authorities would be limited as nearly as possible to the amount suggested. Parliamentary approval for these proposals will be obtained at the earliest practicable date.

4. In accordance with the revised scheme the terms set out in the paragraphs numbered 2 and 3 of the Circular Letter of the 18th March, 1918, will be superseded by the following terms :—

Assisted Schemes.

- (a) The housing schemes of Local Authorities to which the State will be prepared to grant financial assistance, if they are submitted to the Local Government Board within twelve months from this date and carried out within a period of two years from this date, or within such further period as may be approved by the Local Government Board, are :—
 - (1) Schemes carried out by Local Authorities under Part III. of the Housing of the Working Classes Act, 1890, for any area for which the Local Government Board are satisfied that it is desirable that houses for the working classes should be provided.
 - (2) Rehousing schemes in connection with Improvement and Reconstruction schemes under Parts I. and II. of the Housing of the Working Classes Act, 1890, except that no part of the cost of acquiring and clearing a site would be made the subject of financial assistance if either (a) the site had been acquired or cleared before the date of this letter, or (b) the needs of the district could, in the opinion of the Local Government Board, be adequately met by means of a scheme under Part III.

Loans.

- (b) The full cost of a scheme will in the first instance be met out of a loan or loans raised by the Local Authority, and it is particularly desired by the Treasury that Authorities should raise such loans in the open market wherever it is possible for them to do so. As the financial assistance to be granted from Public Funds for housing schemes will take the form of a subsidy as explained below, and as it is important to secure that the whole of the State assistance may be given under one head, any loans granted from the Local Loans Fund for the purpose of assisted schemes will not be made at the preferential rates ordinarily allowed for housing loans, but at a rate fixed by the Treasury so as to correspond with the full current market rate of interest.

General principle of Financial Assistance.

- (c) In respect of any housing scheme or series of housing schemes carried out by a Local Authority within the period referred to above, Parliament will be asked to vote financial assistance calculated on a basis estimated to relieve the Local Authority of the burden of any annual deficit in so far as it exceeds the produce of a rate of a penny in the £ on the area chargeable, but there will be no contribution towards the cost where the annual excess of expenditure over income would not exceed that amount.

Provisional Estimates.

- (d) In order to avoid delay in the commencement of schemes the settlement of the actual amount of the State subsidy will be deferred until after the houses have been built and let, but payments on account will, if necessary, be made on provisional estimates of income and expenditure approved by the Board.

Settlement of Subsidy during transitional period.

- (e) When the houses have been built and let the amount of the subsidy to be paid thereafter during a transitional period ending 31st March, 1927, will be settled on a basis of a revised balance sheet showing the *actual* expenditure incurred and the *actual* rents obtained. The interest charged on loans will be taken at the amounts actually to be paid if the loans are raised from the Local Loans Fund or other outside sources. Where the money is provided from accumulated funds in the hands of the Local Authority interest will be calculated at the rate in force for loans for assisted housing schemes from the Local Loans Fund (unless the Local Authority is also borrowing from other outside sources in respect of its scheme, in which case interest should be charged on advances from accumulated funds at the rate paid for the loans from such other outside sources). Where there is found to be a deficit in excess of the produce of a rate of a penny in the £, the rate of annual contribution so determined will hold good for the remainder of the transitional period.

In making this interim adjustment the Local Government Board will reserve the right of reducing the amount of the subsidy in any case in which there is evidence of failure on the part of the Local Authority to secure due economy in the erection or management of the houses, or that the best rents obtainable are not in fact being obtained.

Final adjustment.

- (f) At the end of the transitional period the whole position will be reviewed in the light of the actual working of the scheme during that period, and the annual amount thereafter to be provided out of public funds will be adjusted as follows. The amount of the estimated annual expenditure will be compared anew with the amount of the estimated annual income, and if as a result of this comparison it appears that the future annual charges to be borne by the Local Authority are likely to exceed the produce of a rate of a penny in the £, the annual subsidy for the remainder of the period of the loan will be finally fixed at a sum calculated to cover this excess, subject only to such adjustment as may be required in consequence of any variation in the amount produced by a penny rate.

At the final adjustment it will be open to the Local Government Board to reduce the amount of the State contribution if there has been evidence of failure on the part of the Local Authority to exercise due economy in management or in securing the best rents obtainable. In the event of the Local Authority and the Local Government Board being unable to reach an agreement on any such question the matter will be referred for final settlement to some independent tribunal.

- (g) In the case of a Rural District the produce of a rate of a penny in the £ for the purpose of the scheme will be based on the assessable value of the whole District unless very strong grounds are shown for a declaration under Section 31 of the Housing, Town Planning, etc., Act, 1909, which would impose the cost of a housing scheme on a contributory place or contributory places in the district.

5. In order to secure that Local Authorities may have advice and assistance locally available to them and to avoid delays, the President is arranging for the appointment of a certain number of Housing Commissioners whose duty it will be to consider and discuss with the Local Authorities in their areas the needs of each district in regard to housing, and to advise and assist them both in the preparation and in the execution of schemes.

Each Commissioner will have an office in his district, and his address will be communicated to each Local Authority and otherwise notified in due course for the information of all concerned. It is the desire of the President that the greatest possible use may be made in every instance of the Commissioner and his expert assistants, but he wishes to make it clear to all Local Authorities that the object of the appointment of these Commissioners is not to diminish the responsibility of the Local Authorities, but to give them assistance and advice and at the same time to relieve the Central Department of some of the detailed work in connection with the schemes.

Under the new organisation it will be possible for schemes to be dealt with by stages, and thus to avoid the friction and delay which might be caused if schemes did not come before the Central Department until they have reached the final stage.

6. The Local Authorities will recognise that, while the revised terms of financial assistance set out in the earlier part of this Circular are exceptionally advantageous from their point of view, they will impose a corresponding responsibility both upon the Local Authorities and upon the Central Department to secure economical construction and management.

Under the organisation above described the Housing Commissioners will be working in the closest possible co-operation with the Local Authorities at all stages. At the same time the Local Government Board will expect the Local Authorities themselves to exercise effective supervision in regard to the cost of construction and the rents obtained, which should approximate as nearly as circumstances permit to the economic level.

7. In order to promote economy and to assist Local Authorities and others engaged in the provision of houses for the working classes, the President is causing certain articles used in the provision of such houses to be standardised. Local Authorities will shortly be furnished with a list and description, with dimensions, of the standardised articles, and it is contemplated that unless the circumstances are shown to be very exceptional these shall be specified and adopted in every scheme. Steps are also being taken to secure the production of large quantities of doors, window frames, and various other fittings of standardised patterns, and to secure an adequate supply of bricks suited to the needs of various localities. A further announcement on this subject will be made shortly, but in the meantime the Local Authorities need have no hesitation in proceeding with the preparation of their schemes on account of anticipated shortage of materials.

8. The Board are about to issue a Manual embodying detailed proposals in regard to the preparation and submission of schemes, suggestions as to lay-out and designs with plans, including premiated designs

of the Royal Institute of British Architects and plans recommended by Sir J. Tudor Walters' Committee, and the latest information in regard to improved methods of construction and building materials and house fittings.

9. With regard to the acquisition of land, an arrangement has been made with the Board of Inland Revenue, under which the Superintending Valuers in the service of that Department will be prepared on the invitation of the Local Authority to express an opinion as to the present value of any site definitely selected by the Local Authority for housing purposes, and, if desired by the Local Authority, the Inland Revenue Valuation Office will undertake negotiations for the purchase of such sites provided that prior notice of their intention to acquire has been given to the owner by the Local Authority. This arrangement will provide for both parties the opinion of an independent authority to serve as a guide to the real value of the property in question, and it may be anticipated that the number of cases in which the parties fail to agree will thus be reduced, and the delay and expense of arbitration avoided.

10. With a view to supplementing the provision of houses by Local Authorities the Government desire to encourage Public Utility Societies to undertake building operations, and it is accordingly their intention to propose to Parliament that financial assistance should be given to such Societies carrying out housing schemes within the same period as that which will apply to Local Authorities. A Memorandum explaining the scope of the proposed assistance, and the conditions on which it will be granted, is in preparation and a copy will be forwarded for the information of the Local Authority at an early date.

11. I am to add that it is the intention of the Government to propose legislation during the coming Session to give further powers to Local Authorities in regard to the provision of houses for the working classes, to enable Local Authorities under the Housing Acts to assist Public Utility Societies by subscribing to their capital and otherwise, to deal with bye-laws and local Act provisions which may be found to impede desirable housing proposals, and generally to facilitate the execution of schemes.

12. In view of the pressing urgency of the housing situation, the preparation of their schemes by the Local Authorities should not be postponed until the introduction of the proposed legislation. Having regard to the terms of financial assistance now offered, the arrangements which are being made for the provision of materials, and the supply of labour which is becoming available owing to the cancellation of war contracts and the demobilisation of the Forces, there should be no reason for any delay. The Government and the Country are looking to the Local Authorities to start at once upon the housing schemes which are rightly regarded as forming one of the most urgent and essential parts of the whole programme of Reconstruction.

I am, Sir,

Your obedient Servant,

H. C. MONRO,

Secretary.

To

The Clerk of the Local Authority.



APPENDIX X.

Circular of 24th March, 1919.

HOUSING.

FINANCIAL ASSISTANCE TO PUBLIC UTILITY SOCIETIES.

In the circular letter addressed by the Local Government Board to Local Authorities in England and Wales on the 6th February, it was announced that with a view to supplementing the provision of houses by Local Authorities, the Government desire to encourage Public Utility Societies to undertake building operations, and that it was accordingly their intention to propose to Parliament that financial assistance should be given to such Societies who submit schemes for the erection of working-class dwellings within a specified time, and carry them out within two years or such further period as may be approved by the Local Government Board. Provisions to this end have been included in the Housing Bill which is at present before Parliament.

The Government are satisfied that much can be done to meet the urgent housing needs of the moment by Public Utility Societies formed or to be formed for the provision of working-class houses. A number of Societies are already in existence, though their activities have necessarily been limited during the war, and it is hoped not only that the existing Societies will extend their operations, but also that many industrial organisations and others interested in the provision of working-class houses will promote the formation of new societies. Employers of labour in both industrial and rural areas are, no doubt, alive to the advantages of securing adequate housing accommodation for their employees under an arrangement which gives the latter, as members of a Public Utility Society, a voice in the management of their houses.

1.—SOCIETIES ELIGIBLE FOR FINANCIAL ASSISTANCE.

In order to rank as a Public Utility Society eligible for financial assistance a Society—

- (a) Must have for its object, or one of its objects, the provision of houses for the working classes ;
- (b) Must be registered under the Industrial and Provident Societies Act, 1893, or any amendment thereof ;
- (c) Must by its rules prohibit the payment of interest or dividend at a rate exceeding the statutory limit,* and
- (d) Must comply with regulations to be made by the Local Government Board, with the approval of the Treasury, under the provisions of the Housing Bill.

These regulations will, subject to certain modifications, embody the conditions and safeguards recommended by the Housing (Financial Assistance) Committee† and set out at the end of this memorandum, and the rules of the Society should be so framed as to secure compliance with the regulations.

2.—TERMS OF FINANCIAL ASSISTANCE.

To a Public Utility Society which complies with the conditions above indicated, the financial assistance to be granted in respect of a housing scheme approved by the Local Government Board and carried out within the prescribed period will take the following forms :—

Raising of Capital.

The Public Works Loan Commissioners will be authorised to advance on the recommendation of the Local Government Board so much of the capital required as in the opinion of the Board the Society cannot reasonably be expected to raise from private sources ; but the total amount so advanced will in no case exceed three-quarters of the total cost of the acquisition of the land, the development of the site and the erection of the houses, as shown by the accepted tenders.

The loan will be advanced at the rate at which advances are, for the time being, made to Local Authorities by the Public Works Loan Commissioners for assisted housing schemes. It will run for a period not exceeding 50 years, and the repayment of principal and interest, which will be a first charge upon the property, will be on the annuity system.

It is proposed to arrange for advances to be made by instalments, as the work proceeds, on the certificate of an architect or surveyor, approved by the Local Government Board, but before advancing each instalment the Public Works Loan Commissioners will require to be satisfied that a proportionate instalment of the capital to be privately subscribed has been raised. The advances in respect of unfinished houses will not in any case exceed 50 per cent. of the cost represented by the work done.

If in the opinion of the Public Works Loan Commissioners there is a special risk that it may at some future date during the currency of the loan be impossible to secure tenants for a large proportion of the houses owing to changes in the industrial circumstances of the locality, it will be open to them to require collateral security.

* At present the statutory limit imposed by Section 4 of the Housing and Town Planning, etc., Act, 1909, is 5 per cent., but under the Housing Bill it is proposed to authorise the payment of interest or dividend up to a maximum of 6 per cent.

† Copies of the Interim Report of this Committee, Cd. 9223, can be obtained through any bookseller or directly from His Majesty's Stationery Office, Imperial House, Kingsway, W.C. 2, or 28, Abingdon Street, S.W.1.

Exchequer Subsidy.

1. In addition to the advance of capital above mentioned, an annual subsidy will be paid during the currency of the loan by the Local Government Board in consideration of the abnormal cost of building houses at the present time. The subsidy will be an amount equal to 40 per cent. of the annual charges on three-quarters of the total capital raised in respect of the approved scheme, and, for the purpose of calculation, the charges will be reckoned on the basis of the Public Works Loan Commissioners' terms for repayment of principal and interest by equal half-yearly instalments, from whatever source the capital may in fact have been raised.

2. While the amount of the subsidy will be determined on the basis above described, the Local Government Board will reserve to themselves the right of reducing the subsidy in any case in which there is evidence of failure on the part of the Society to secure due economy in the erection of the houses.

3. Any Society seeking financial assistance will be required to give an undertaking in legal form that, after the loan has been paid off, any profits of the Society in excess of 6 per cent. shall be devoted in whole or in part as may be required by the Local Government Board towards the repayment of sums received from the Exchequer by way of subsidy during the currency of the loan; and that in the event of the property being sold, either before or after the loan has been paid off, the Society will, as a condition of such sale, after paying off outstanding charges (if any) and shares at par, repay if so required by the Local Government Board the whole or part of the Exchequer subsidies.

3.—PROCEDURE.

1. The Housing Commissioner for the district will be ready to advise any persons proposing to form a Public Utility Society for housing purposes as to the rules of the Society and to arrange for a conference with the Local Authority with a view to ascertaining what assistance may be looked for from the Local Authority, both in the shape of advances of capital and in regard to sewerage, water supply and other public services.

2. The advice of the Commissioner and his expert staff will be at the disposal of the Society in regard to the selection of a site, and the proposals of the Society as to this and the general outlines of their scheme should be submitted to the Commissioner at the earliest stage.

3. If the proposals are such as in the opinion of the Commissioner are likely to be approved by the Local Government Board, plans should be prepared on the advice of a properly qualified architect for the lay-out of the site and for the houses, of which there should ordinarily be approximately 12 to the acre in urban areas and 8 in agricultural areas.

Where possible an option to purchase the suggested site should be obtained and the purchase should not be completed until the site has been inspected and approved.

4. Before giving their formal approval to schemes the Board will require to be furnished with plans and estimates, a statement of the rents proposed to be charged and information as to the Society's share and other capital together with a copy of the registered rules. But if the procedure above described is followed the preliminary steps can be taken in consultation with the Commissioner, and the schemes can be dealt with by stages and delay thus avoided.

5. In order to promote economy and to assist those engaged in the provision of houses for the working classes steps have been taken to secure supplies of certain building materials and standardised fittings, which will be available for the use of Public Utility Societies. There need, therefore, be no hesitation in proceeding with the preparation of schemes on account of an anticipated shortage of materials. The Board are issuing a Manual which will contain further information on this subject as well as detailed proposals in regard to the preparation and submission of schemes and suggestions as to lay-out, with designs and plans.

Recommendations as to safeguards contained in the Report of the Housing (Financial Assistance) Committee of the Ministry of Reconstruction.

- (i) All tenants should be entitled (though not required) to become shareholders of the Society on equal terms.
- (ii) Tenant members should have the right to elect annually a Tenant Members' Committee, each tenant having one vote.
- (iii) At least one-quarter of the Board of Management should be appointed by the Tenant Members' Committee.
- (iv) Holders of loan stock should only be entitled to vote at a Society's meeting if they are shareholders, and only to give a vote in respect of loan stock representing at least five times the capital represented by a share vote.
- (v) Security of tenure should be provided for. A tenant should only be given notice to quit for (a) non-payment of rent, or (b) acts or defaults tending to the detriment of the property, or (c) bad neighbourhood. Nothing in this clause should prevent a termination of a tenancy for failure to pay an increased rent in cases where the increase has been approved by the Central Authority. The question of whether a tenant has been guilty of bad neighbourhood should be determined by the Tenant Members' Committee.
- (vi) The lay-out and design of the houses should be approved by the Central Authority, and the same authority should supervise the carrying out of the plans (either directly or through the agency of the Local Authority).
- (vii) Profits, over and above the maximum rate allowed, should after due provision for Reserve Fund, be used for the benefit of the tenants generally.
- (viii) Rents should be approved by the Central Authority.

- (ix) Societies should not be allowed to sell houses, except subject to the consent of, and under conditions laid down by, the Central Authority.
- (x) Building contracts should be approved by the Central Authority.
- (xi) Professional charges paid by Societies should not exceed a fixed percentage on cost, and management expenses should not exceed a fixed precentage on gross rental.
- (xii) The accounts should be audited and certified by a District Auditor, or other Auditor appointed by the Government (who should have the power of surcharge) and filed with the Central Authority and the Local Authority of the District, with the right of inspection by the public.
- (xiii) On the dissolution of a Society the Local Authority should have the right of pre-emption at a figure sufficient to pay off shares at par, loans, loan stock and debts. If this right is not exercised the estate should be sold by public auction and any surplus remaining, after discharging all obligations, be paid to the Local Authority, and by it applied for housing or other like purposes.

All communications with reference to this Memorandum should be addressed to the Local Government Board, Whitehall, S.W. 1, or, in the case of Scotland, to the Local Government Board for Scotland, Edinburgh.

24th March, 1919.

APPENDIX XI.

List of recent Reports of Government Committees dealing with different questions in relation to Housing.

1. Report of the Committee appointed by the President of the Local Government Board and the Secretary for Scotland to consider questions of building construction in connection with the provision of dwellings for the working classes, and to report upon the methods of securing economy and despatch in the provision of such dwellings. Cd. 9191, price 1s.
 2. Reports of the Women's Housing Sub-Committee appointed by the Minister of Reconstruction to consider the plans of houses from the point of view of the convenience of the house-wife.
 - Interim Report. Cd. 9166, price 1d.
 - Final Report. Cd. 9232, price 3d.
 3. Report of the Building Materials Supply Committee appointed by the Minister of Reconstruction to consider the position of the building industry after the war. Cd. 9197, price 3d.
 4. Report of the Departmental Committee on Byelaws appointed by the President of the Local Government Board. Cd. 9213, price 6d.
 5. Reports of the Committee on the Acquisition and Valuation of Land for public purposes, appointed by the Minister of Reconstruction :—
 - 1st Report dealing with the acquisition of land. Cd. 8998, price 6d.
 - 2nd Report dealing with the valuation of land. Cd. 9229, price 4d.
 6. Reports of the Housing (Financial Assistance) Committee appointed by the Minister of Reconstruction to consider and advise on the practicability of assisting any bodies or persons other than Local Authorities to build dwellings for the working classes immediately after the war :—
 - Interim Report dealing with Public Utility Societies. Cd. 9223, price 2d.
 - Final Report. Cd. 9238, price 3d.
 7. Report of the Committee appointed by the Minister of Reconstruction to consider the legislation embodied in the Increase of Rent and Mortgage Interest (War Restrictions) Act, 1915, and its amendments, in relation to the housing of the working classes after the war. Cd. 9235, price 3d.
-

The above publications can be obtained through a bookseller or directly from H.M. Stationery Office at the following addresses :—

Imperial House, Kingsway, London, W.C. 2, and 28, Abingdon Street, London, S.W. 1; 37, Peter Street, Manchester; 1, St. Andrew's Crescent, Cardiff; 23, Forth Street, Edinburgh; or from E. Ponsonby, Ltd., 116, Grafton Street, Dublin

APPENDIX XII.

Regional Areas and Headquarters of the District Housing Commissioners.

Region A.—Cumberland, Northumberland, Westmorland and Durham.

Headquarters : Gibb Chambers, 52, Westgate Road, Newcastle-upon-Tyne.

Region B.—Yorkshire (North, East and West Ridings).

Headquarters : Quebec House, Quebec Street, Leeds.

Region C.—Lancashire and Cheshire.

Headquarters : 77, Shude Hill, Manchester.

Region D.—Wales and Monmouth.

Headquarters : Insurance Buildings, New Street, Cardiff.

Region E.—Staffordshire, Shropshire, Warwickshire, Worcestershire and Herefordshire.

Headquarters : Phoenix Buildings, Colmore Row, Birmingham.

Region F.—Parts of Holland, Kesteven and Lindsey (Lincs,) Notts, Derbyshire, Leicestershire and Rutland.

Headquarters : 12, Regent Street, Nottingham.

Region G.—Gloucestershire, Dorsetshire, Somerset, Wilts, Devon and Cornwall.

Headquarters : Parklands, Tyndalls Park Road, Bristol.

Region H.—Hants, Isle of Wight, Southampton, Sussex East, Sussex West ; and Surrey and Kent so far as not in the Metropolitan Police District.

Headquarters : 8, Buckingham Gate, London, S.W. 1.

Region K.—The Metropolitan Police District.

Headquarters : London.

Region L.—Berks, Bucks, Oxon, Northamptonshire, Bedfordshire, Huntingdonshire, and Hertfordshire so far as not in the Metropolitan Police District.

Headquarters : Buchanan Chambers, 24, Holborn, London, E.C. 1.

Region M.—Cambridgeshire, Isle of Ely, Norfolk, Suffolk East, Suffolk West, and Essex so far as not in the Metropolitan Police District.

Headquarters : 300, Gresham House, Old Broad Street, London, E.C. 1.



SUGGESTED HOUSE PLANS

(SEE PARAGRAPH 34, PAGE 8 AND APPENDIX IV, PAGE 29)

N°1

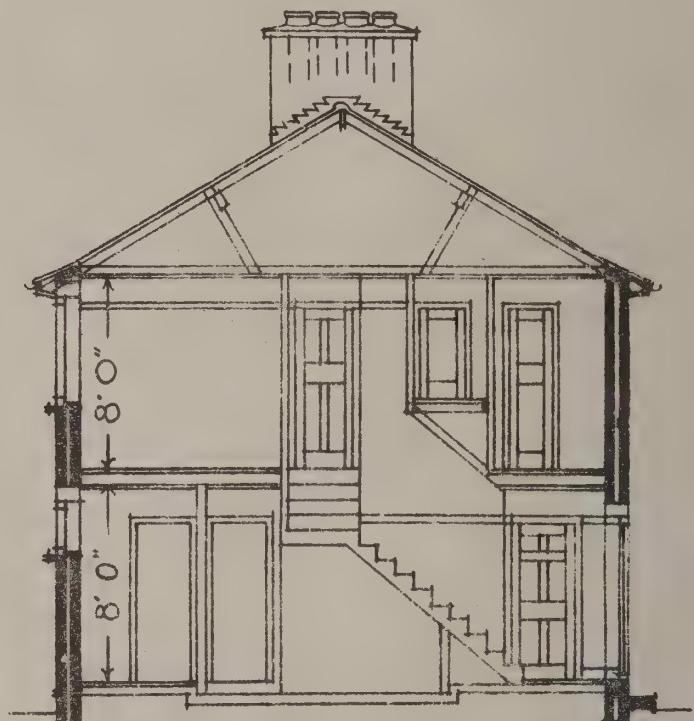
CLASS A URBAN
SOUTHERLY ASPECT



FRONT ELEVATION



SIDE ELEVATION



SECTION AB

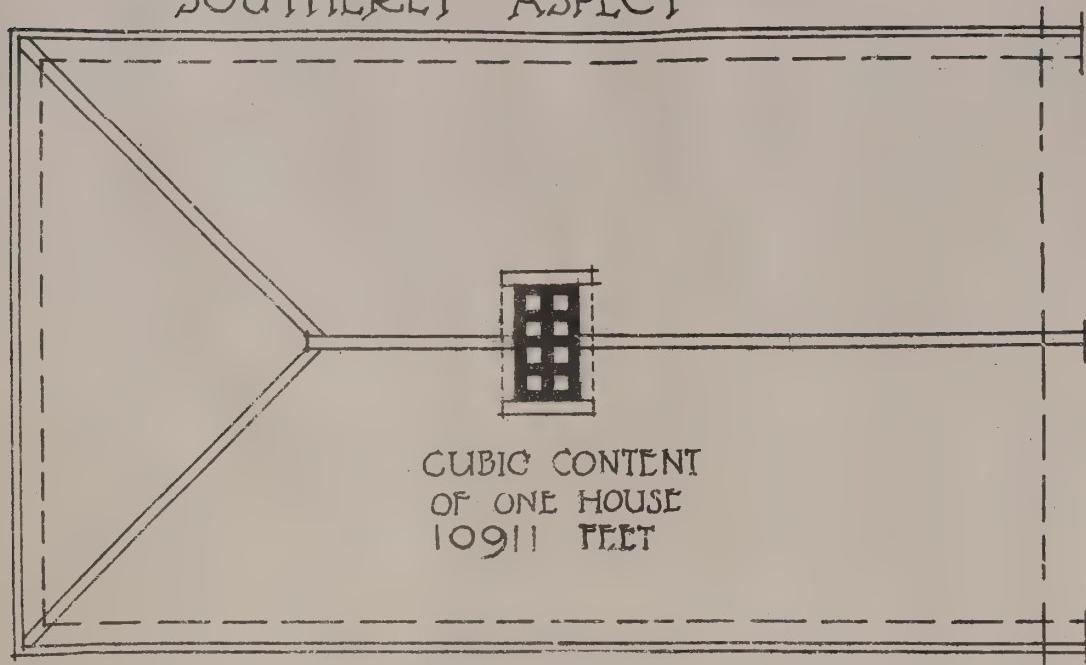


L.G.B., H.D.

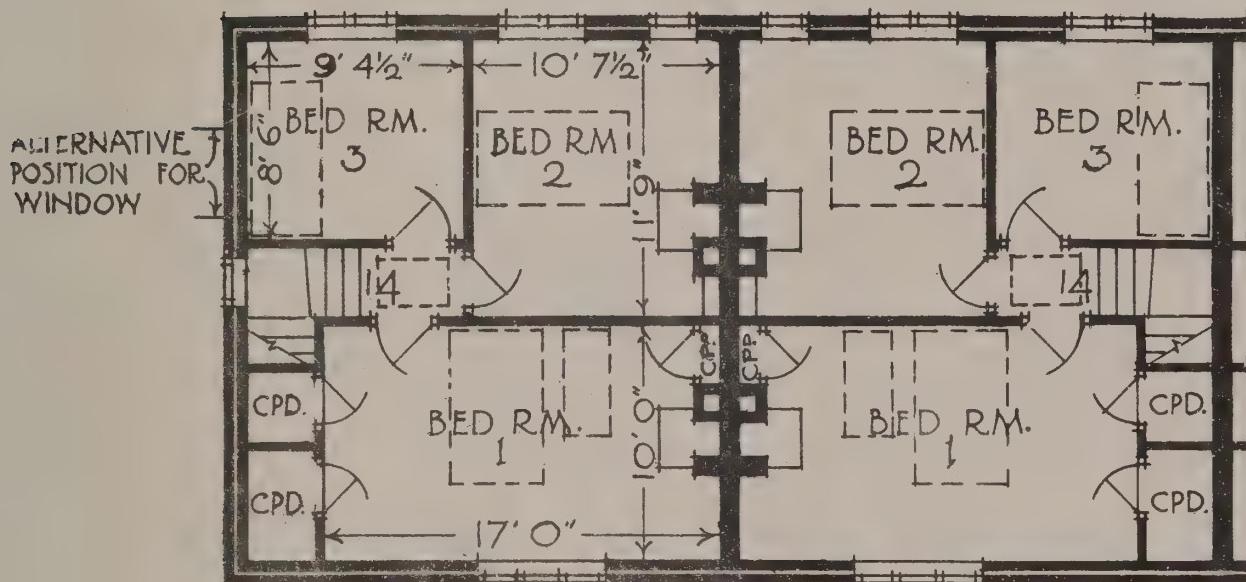
BACK ELEVATION

CLASS A URBAN SOUTHERLY ASPECT

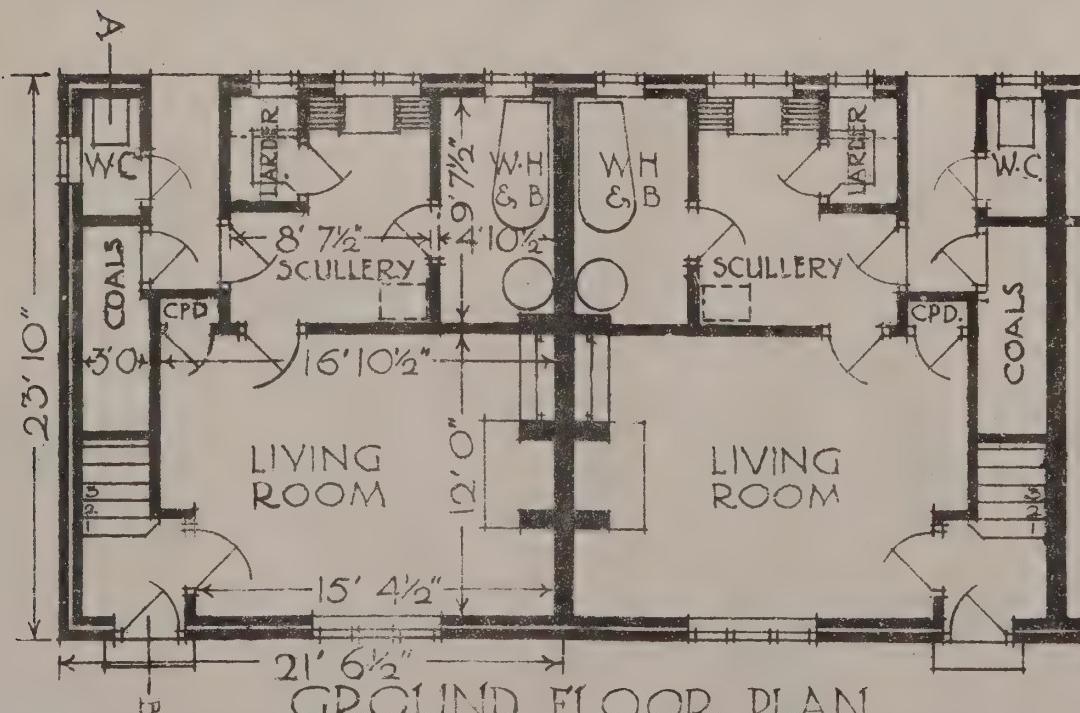
N° 1



ROOF PLAN



FIRST FLOOR PLAN



GROUND FLOOR PLAN

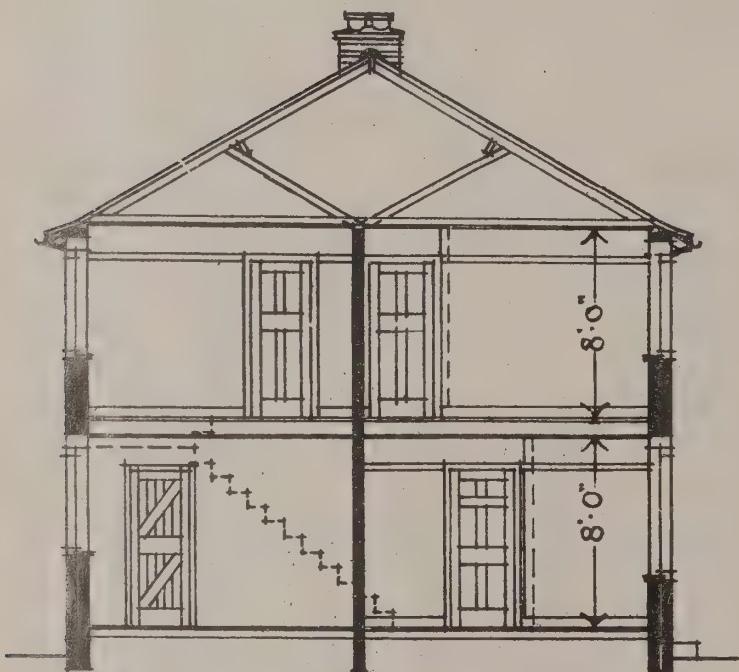
L.G.B., H.D.

N°2

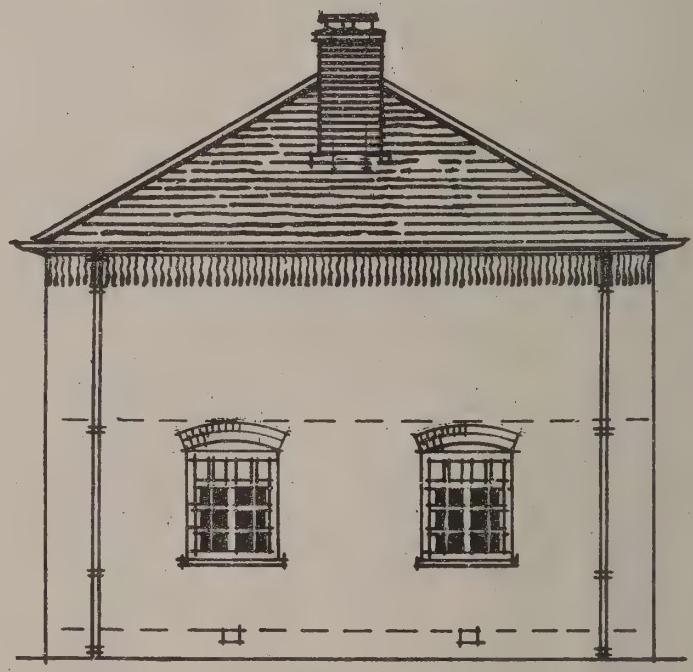
CLASS A URBAN
SOUTHERLY ASPECT.



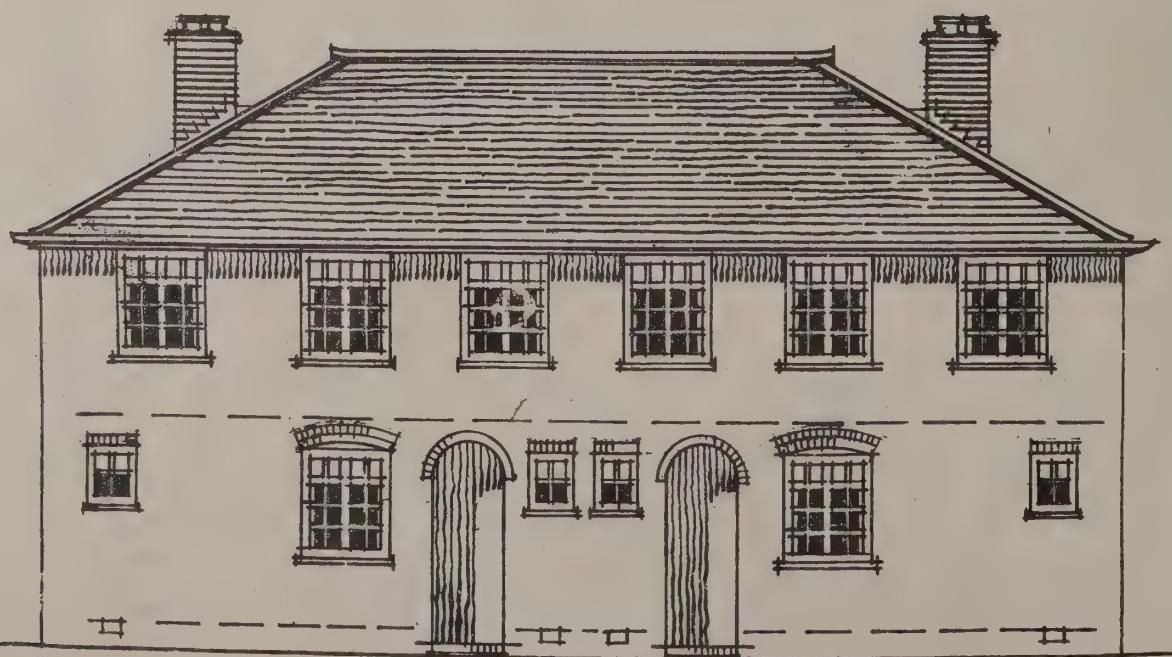
FRONT ELEVATION



SECTION A·B.



SIDE ELEVATION



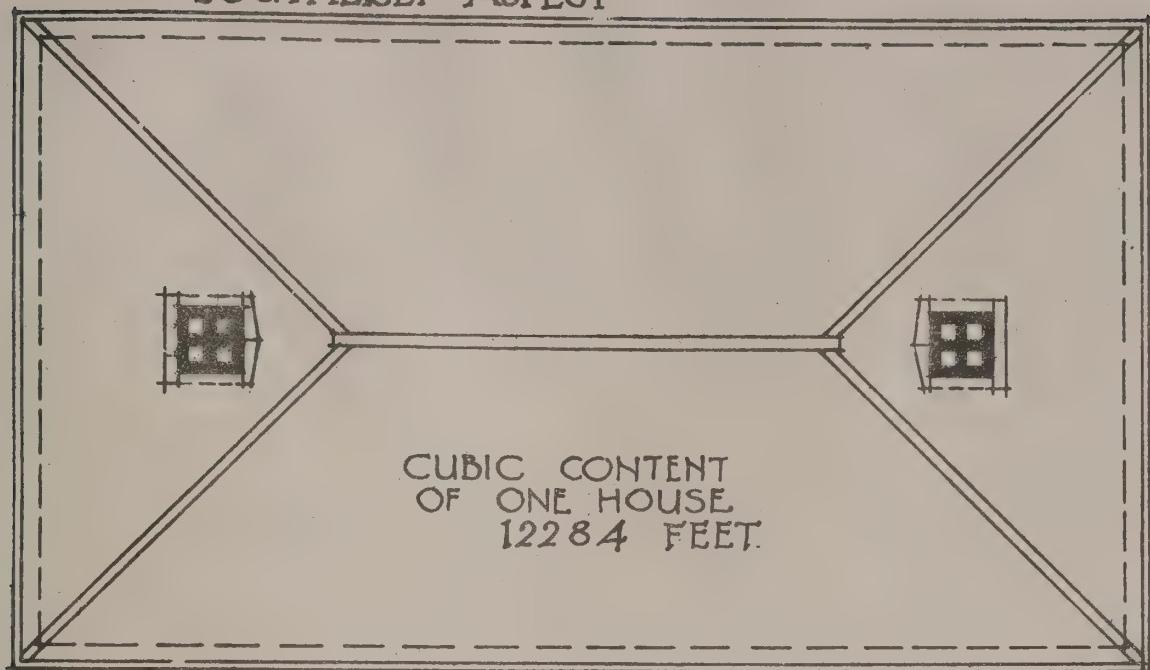
L.G.B.H.D

BACK ELEVATION

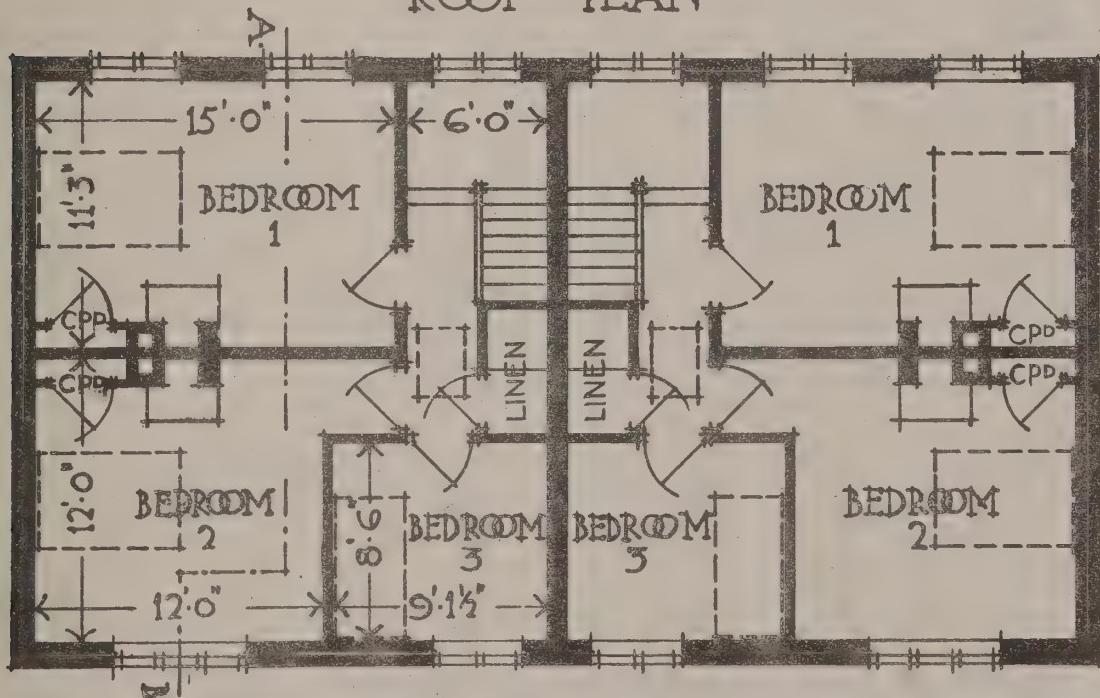
CLASS A
SOUTHERLY ASPECT

URBAN

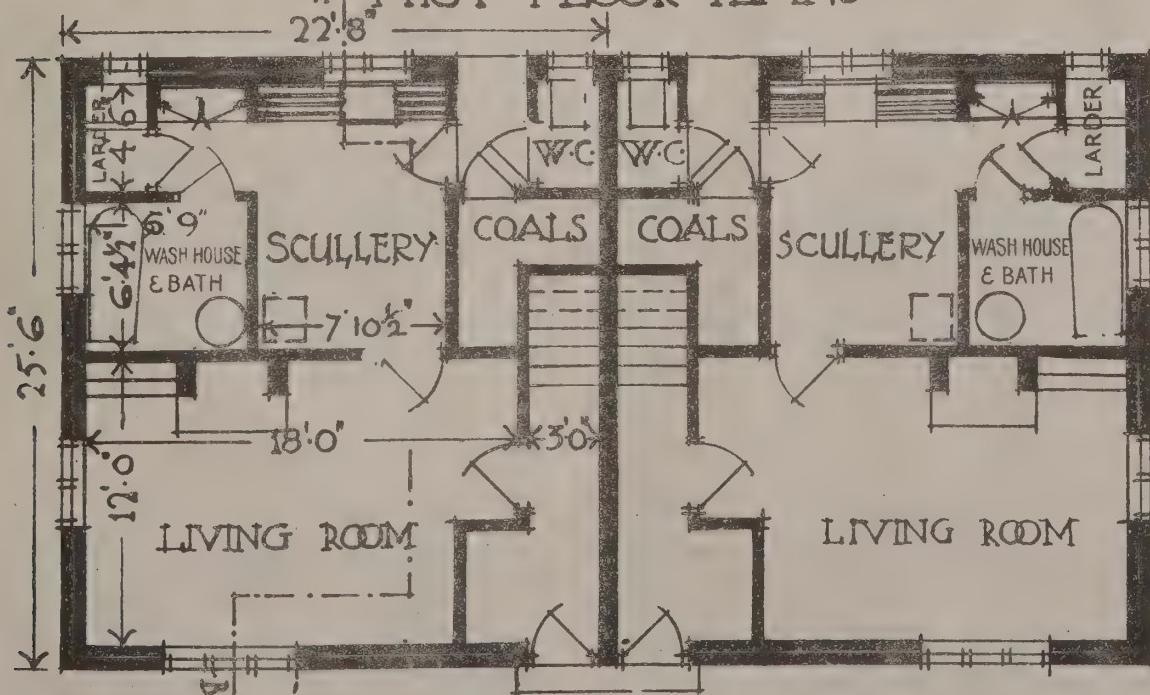
N°2



ROOF PLAN



FIRST FLOOR PLANS



GROUND FLOOR PLANS

N°3

CLASS A URBAN
NORTHERLY ASPECT

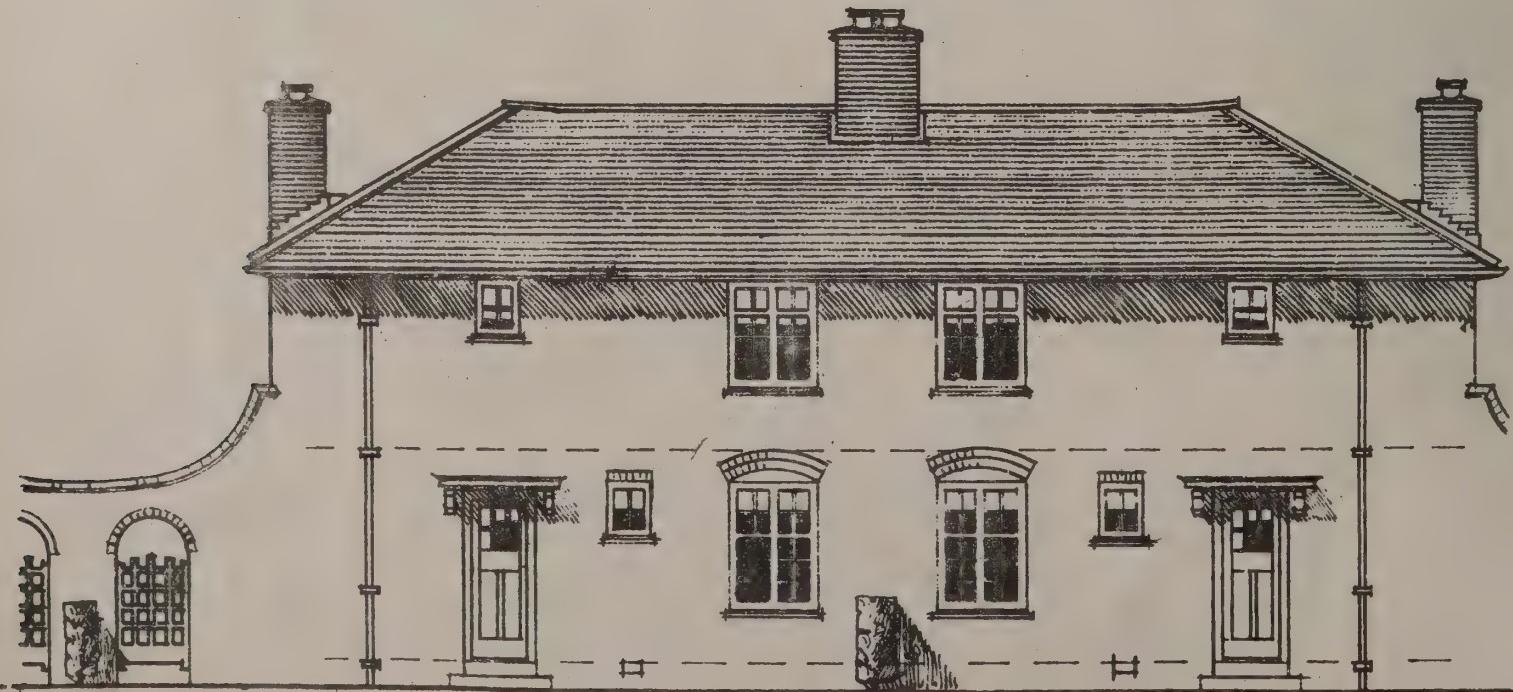


BACK ELEVATION



SIDE ELEVATION

SECTION A-B



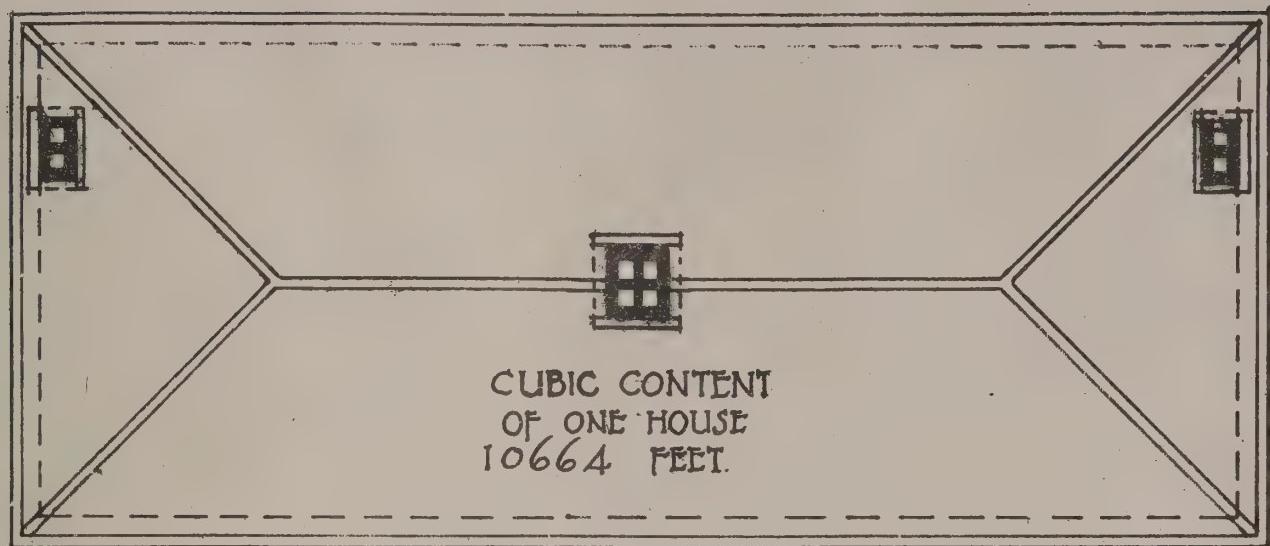
L.G.B. H.D.

FRONT ELEVATION

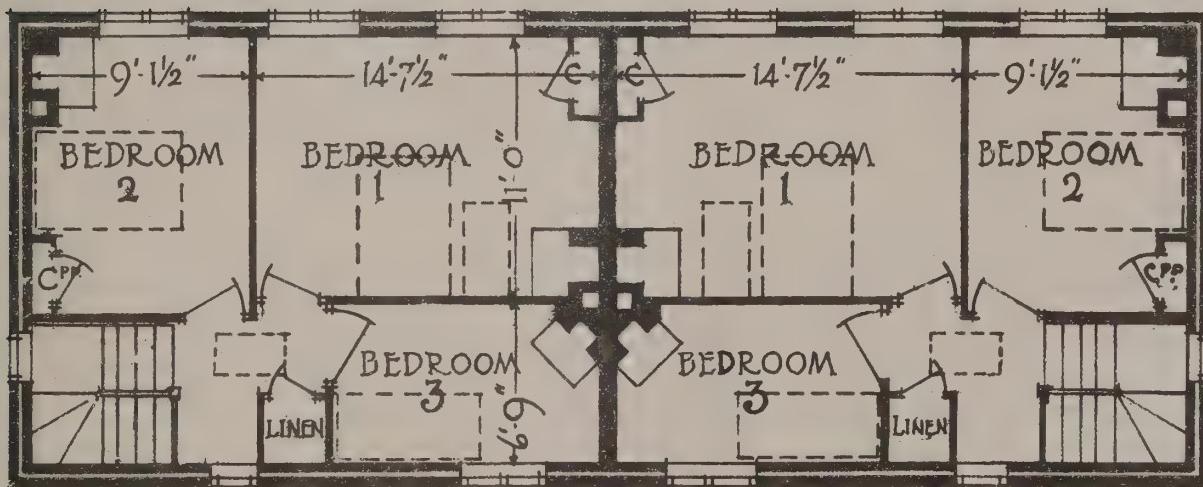
CLASS A URBAN

N°3

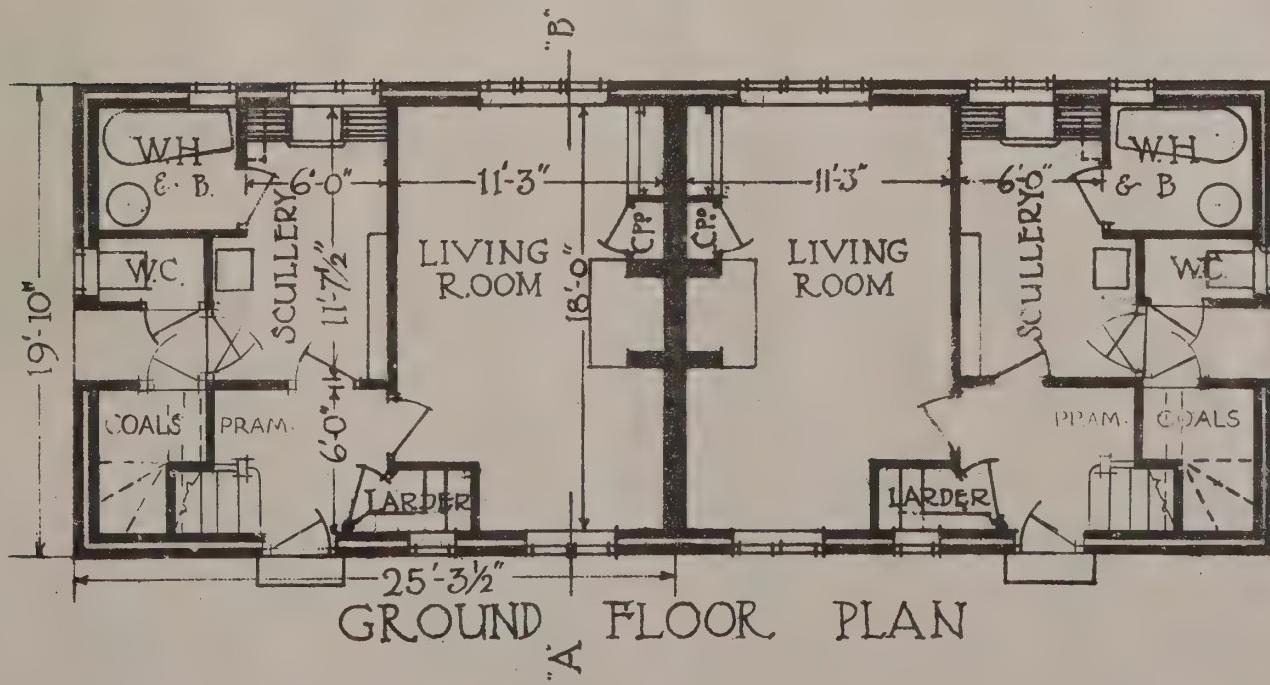
NORTHERLY ASPECT



ROOF PLAN



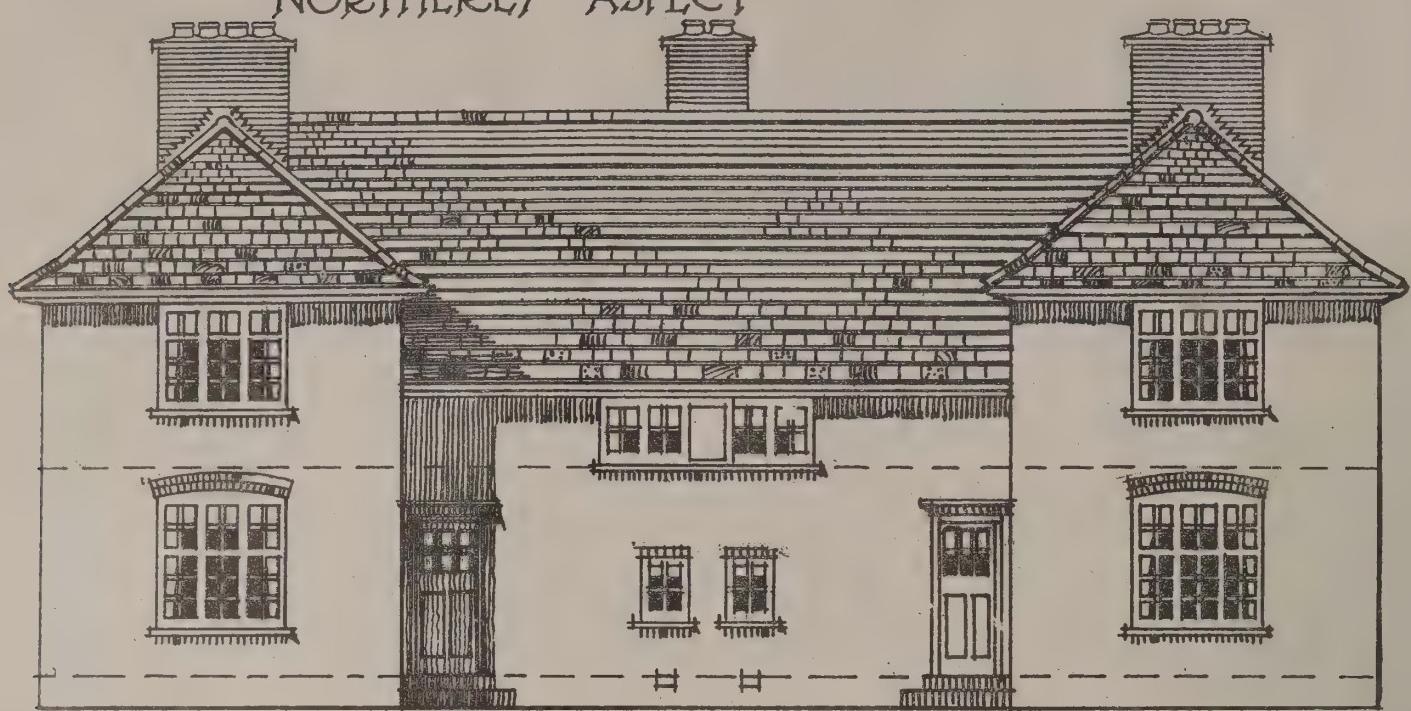
FIRST FLOOR PLAN



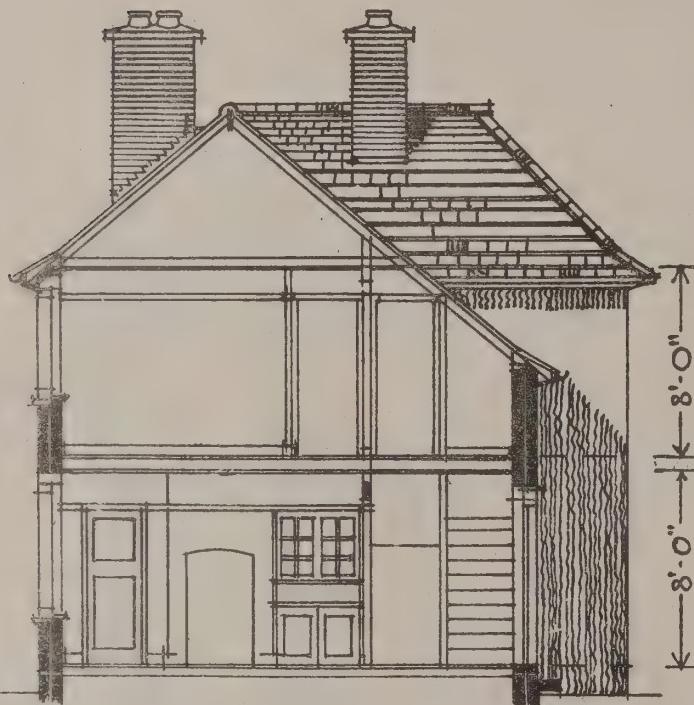
N°4

CLASS B4
NORTHERLY ASPECT

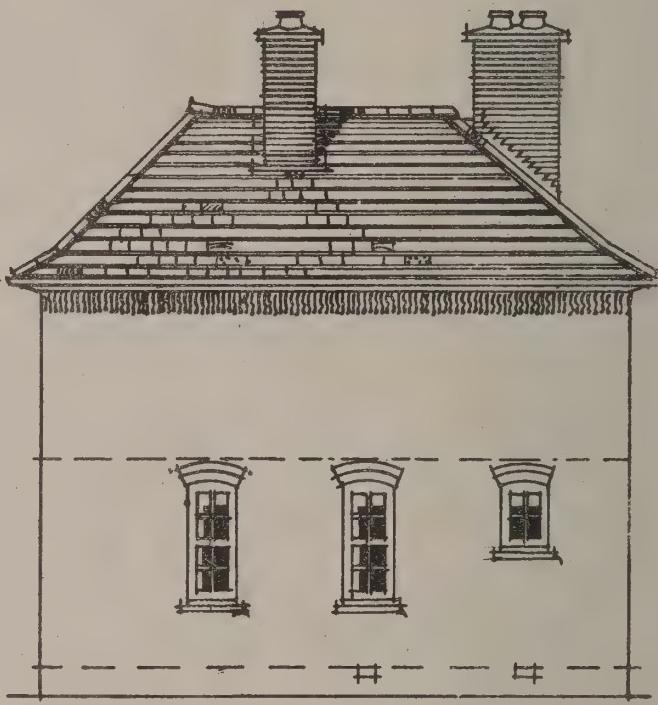
URBAN



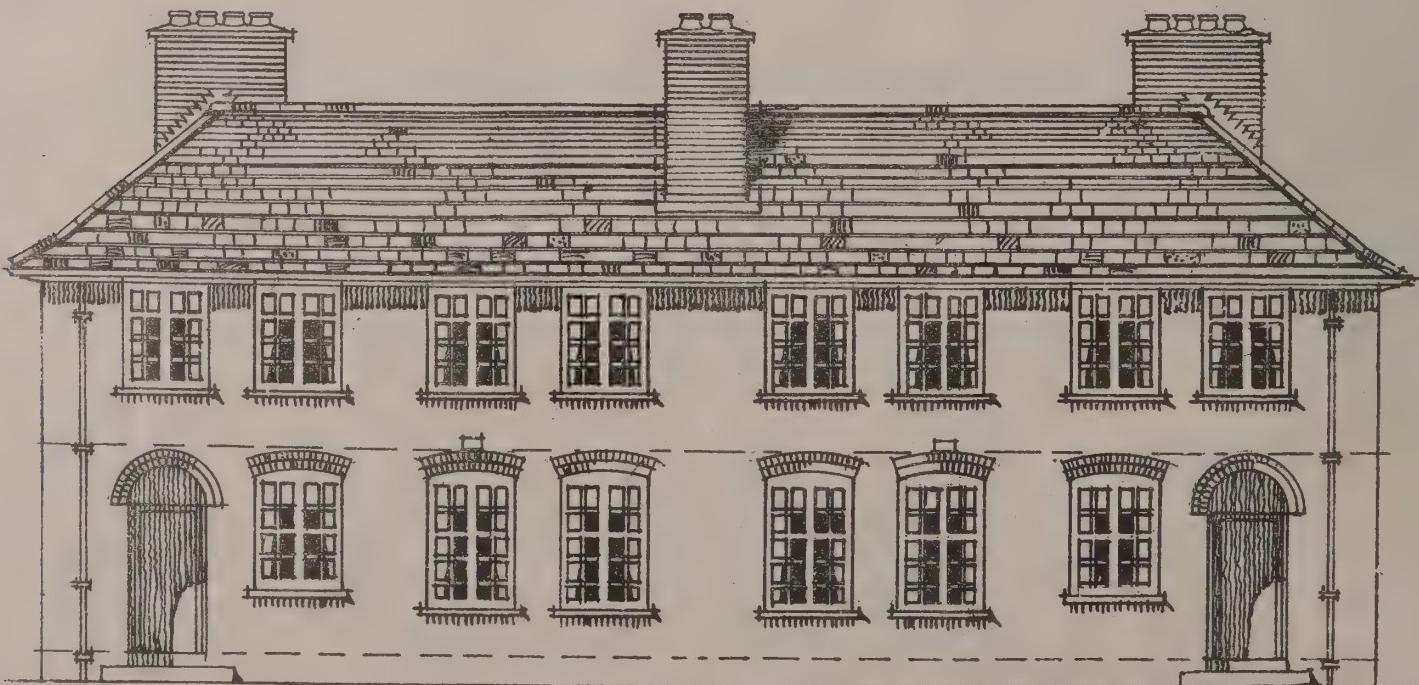
FRONT ELEVATION



SECTION A-B.



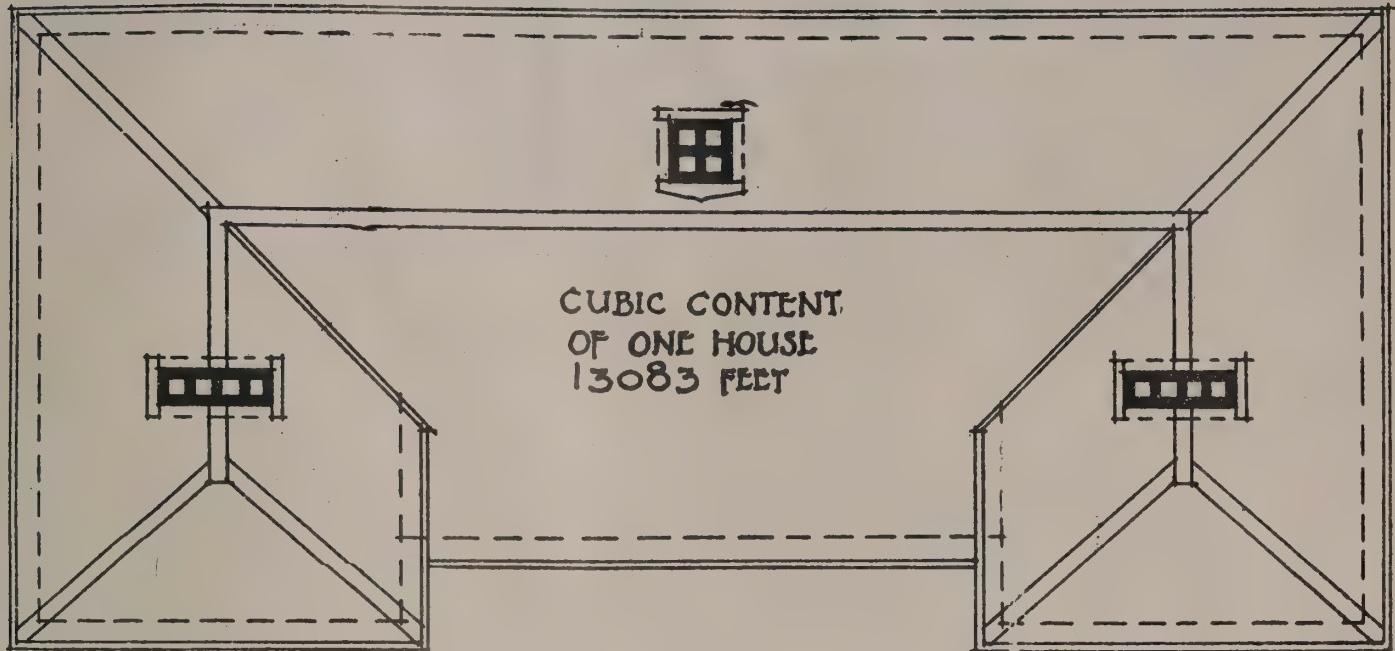
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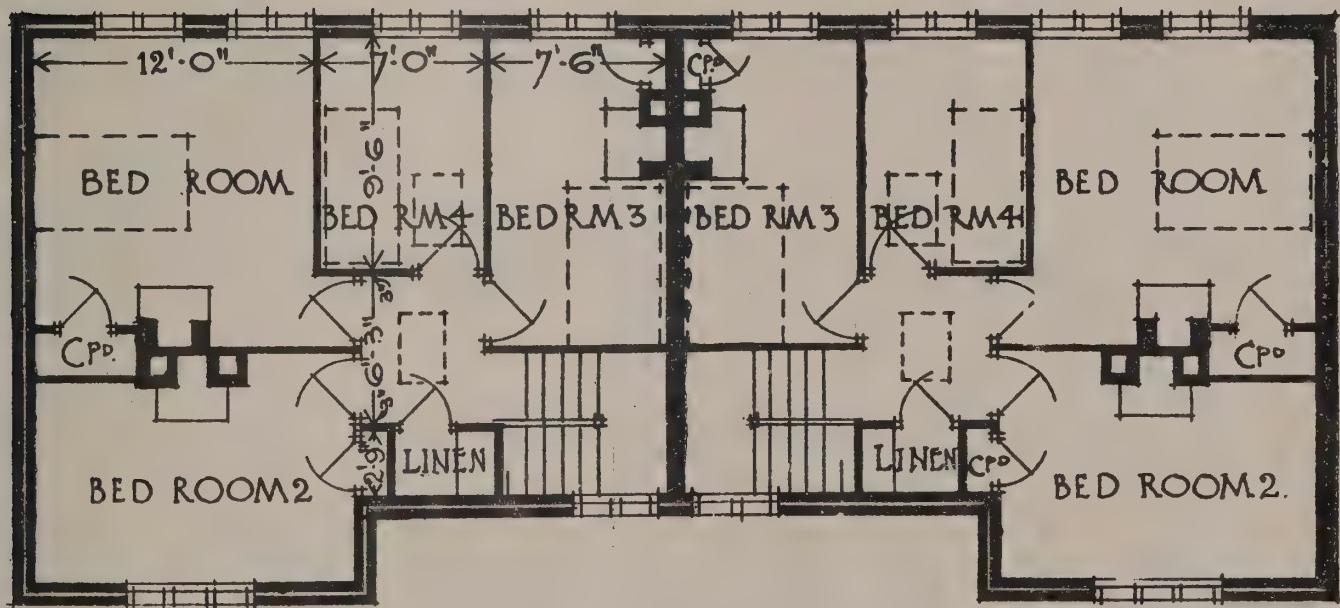
L.G.B., HD.

BACK ELEVATION

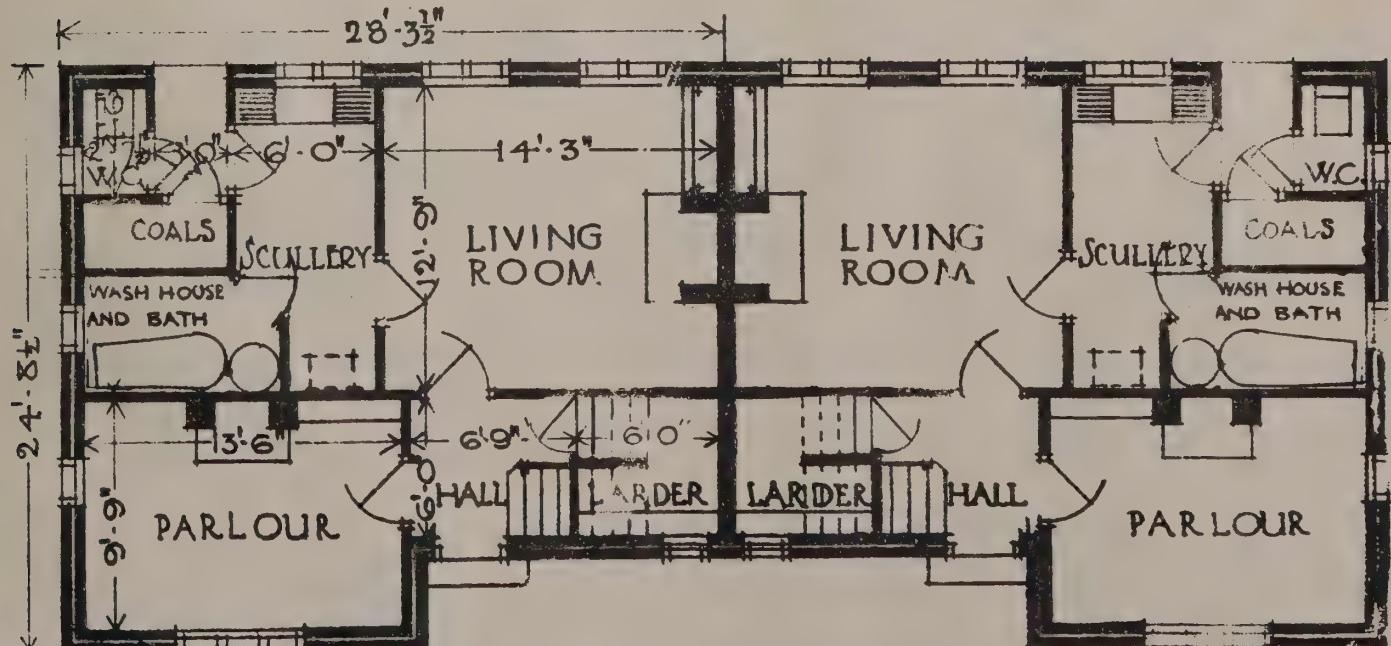
CLASS B⁴ URBAN N°4
NORTHERLY ASPECT



ROOF PLAN



FIRST FLOOR PLAN



GROUND FLOOR PLAN

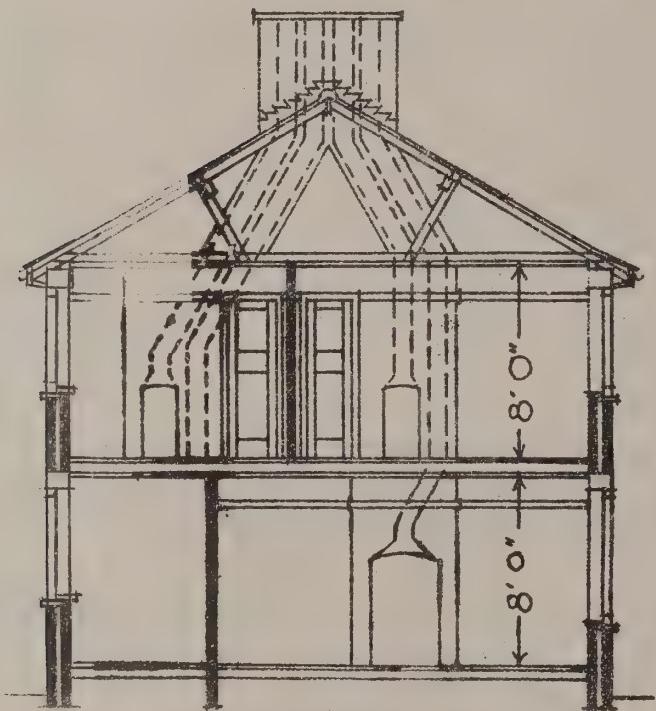
L.G.B.HD.

Nº5 CLASS B⁴ URBAN

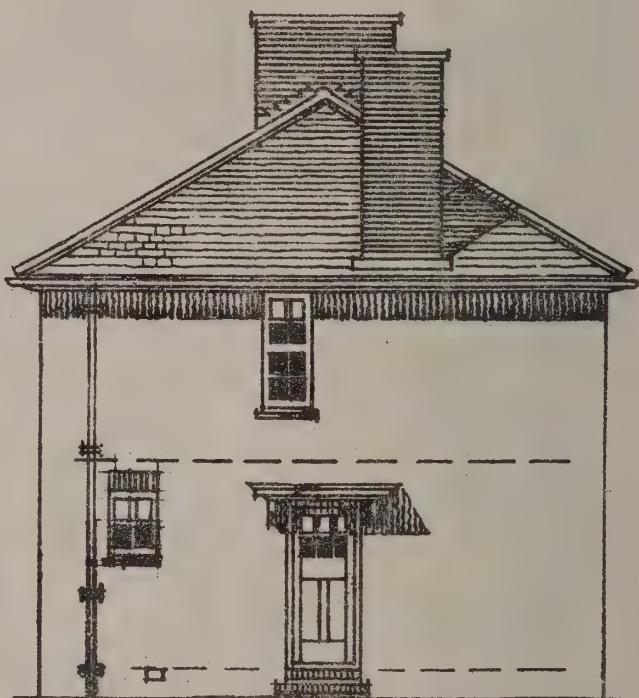
SOUTHERLY ASPECT



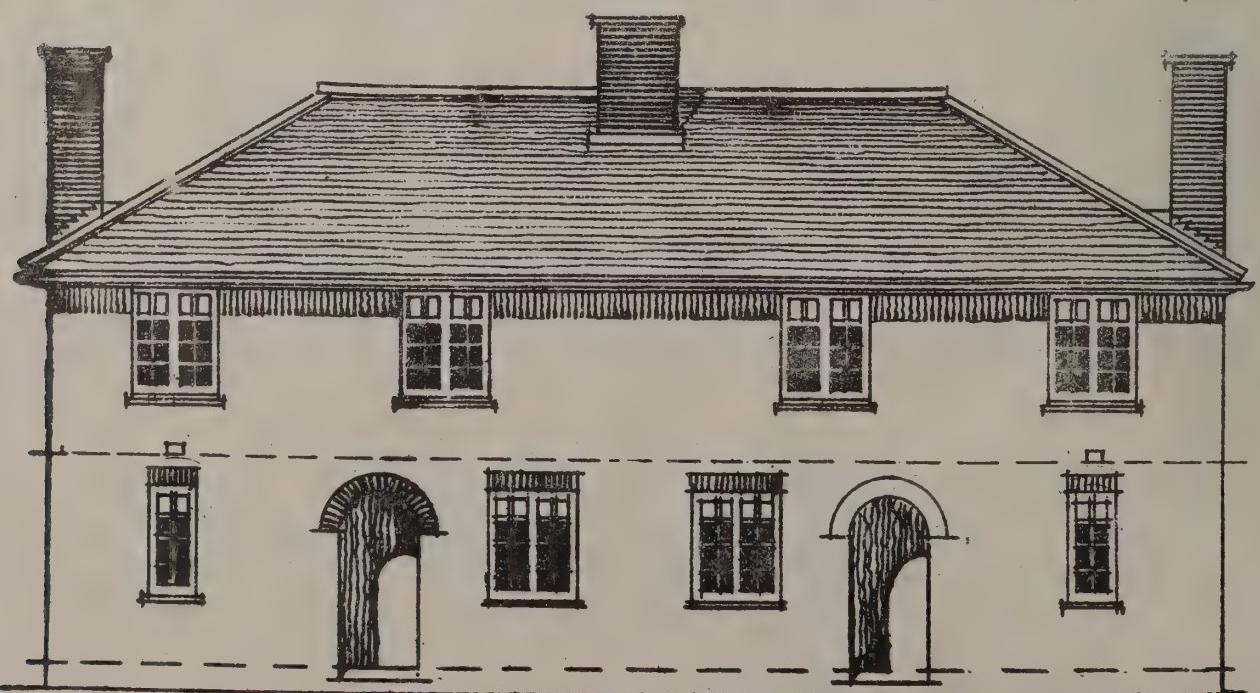
FRONT ELEVATION



SECTION AB



SIDE ELEVATION



L G.B.-H.D

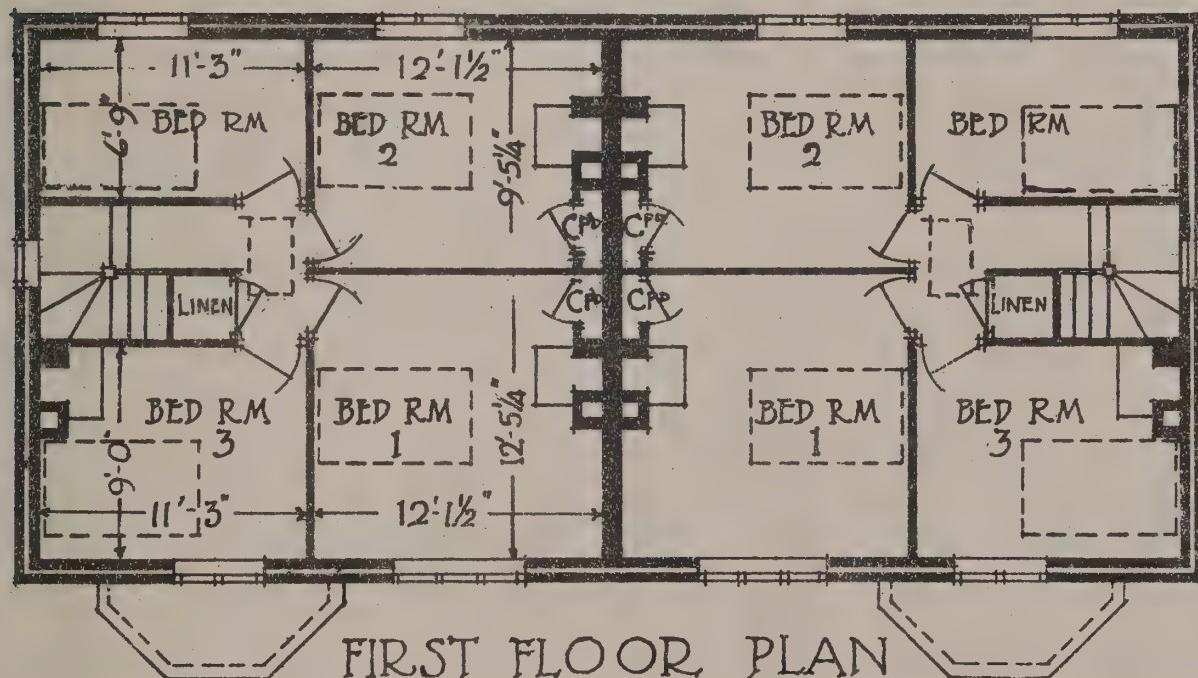
BACK ELEVATION

CLASS B⁴ URBAN N°5

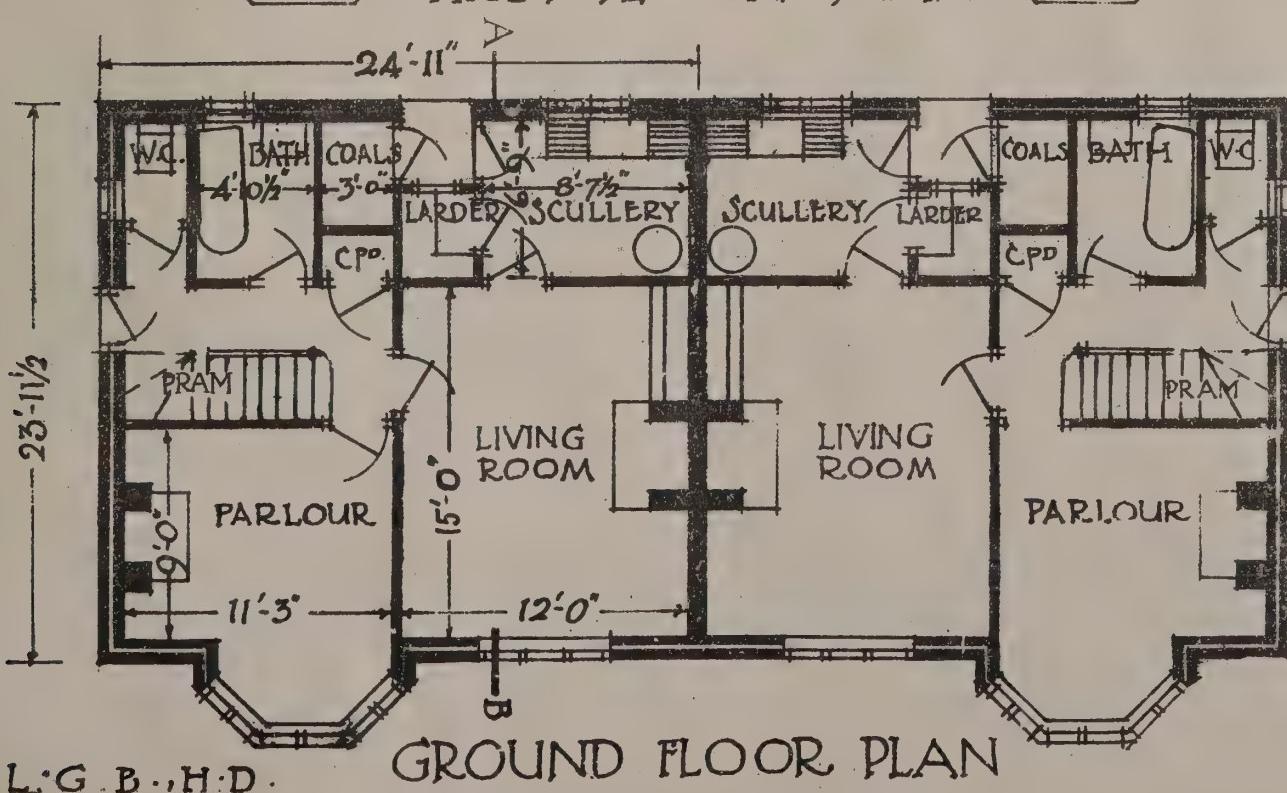
SOUTHERLY ASPECT

CUBIC CONTENT
OF ONE HOUSE
12948. FEET

ROOF PLAN



FIRST FLOOR PLAN

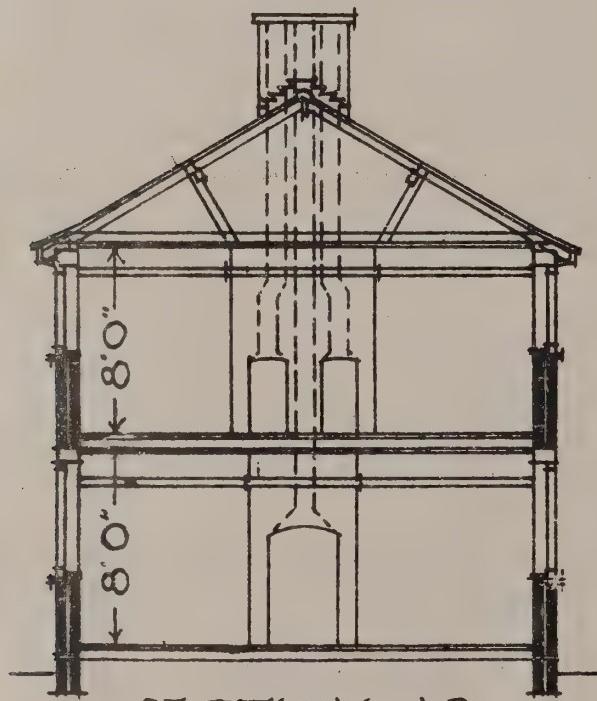


Nº6

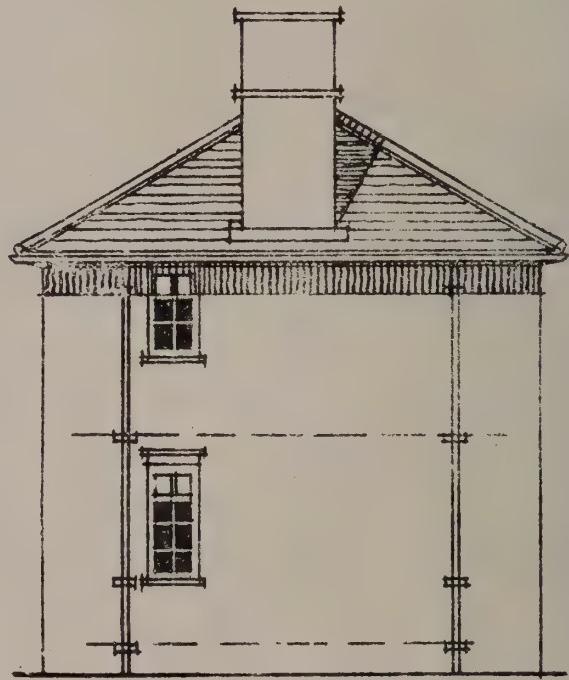
CLASS B URBAN
SOUTHERLY ASPECT



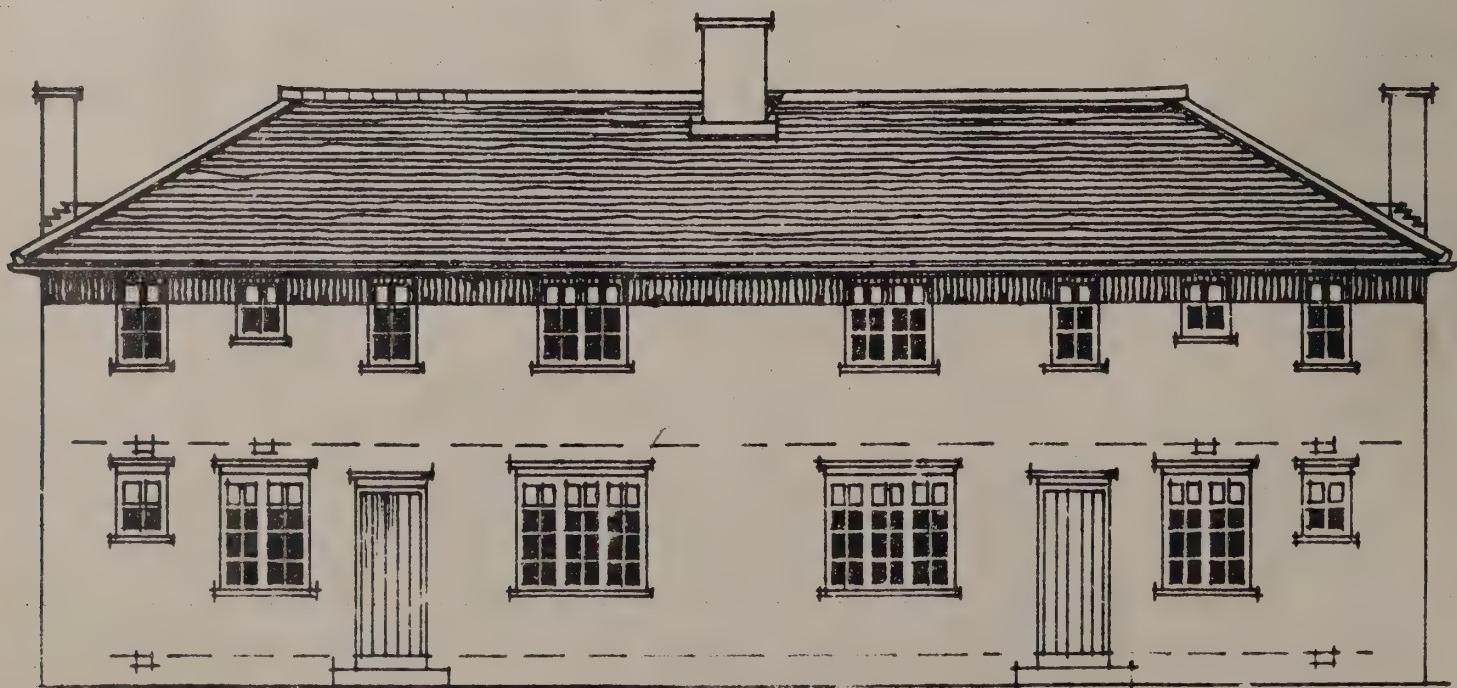
FRONT ELEVATION



SECTION AB



SIDE ELEVATION

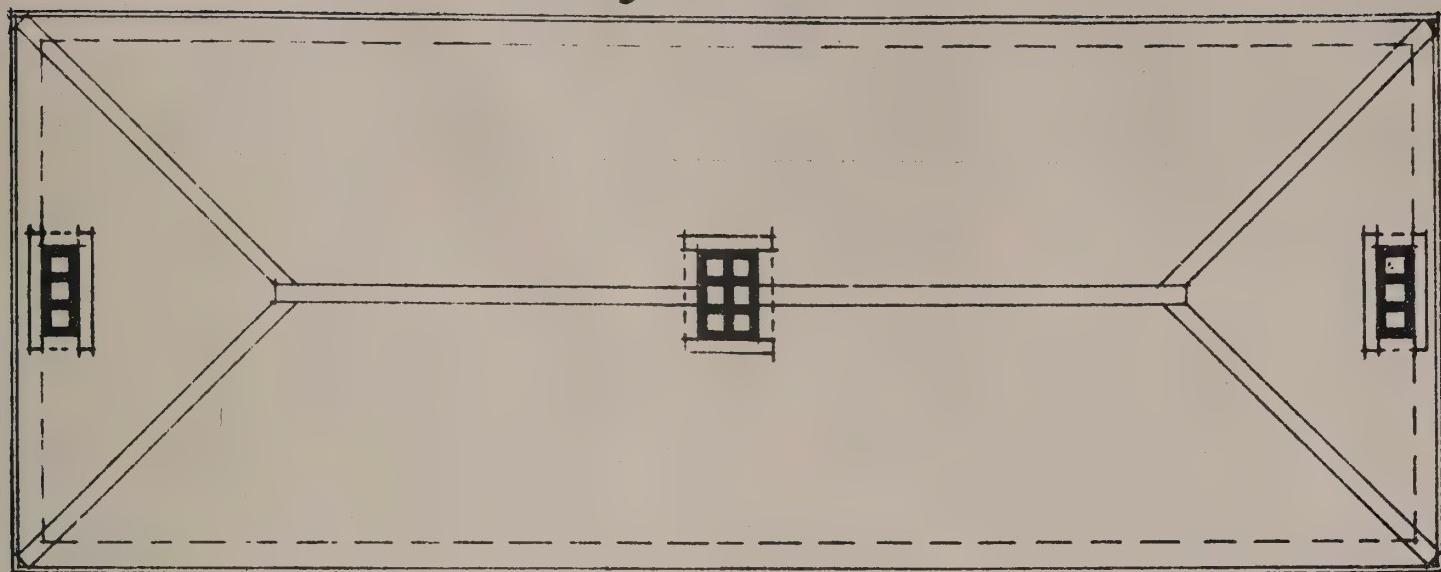


BACK ELEVATION

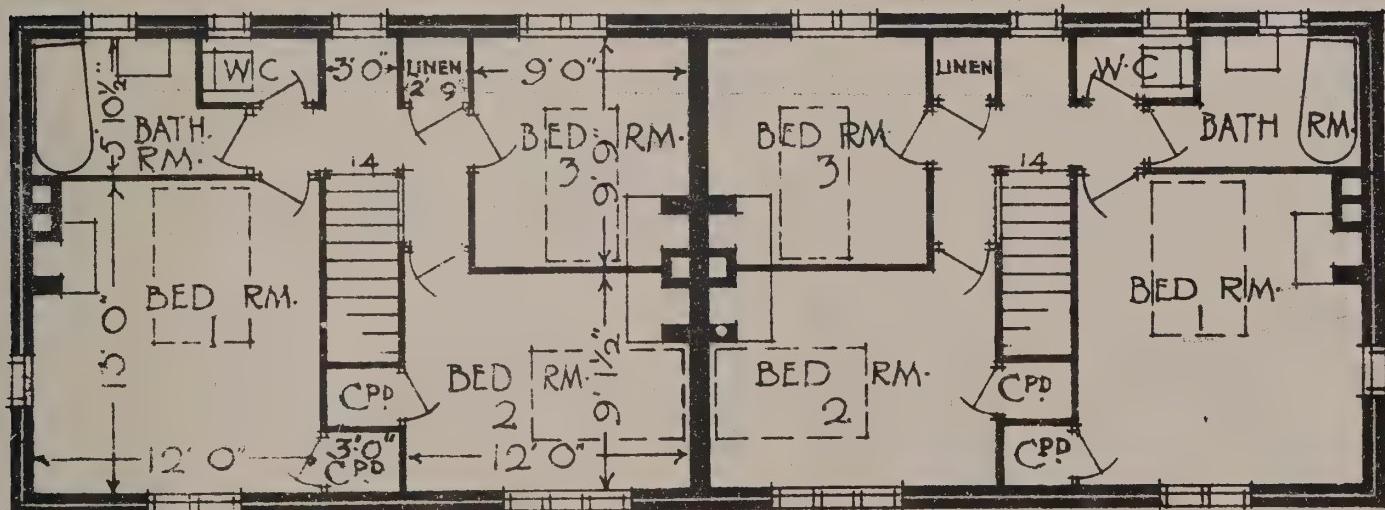
CLASS B URBAN
SOUTHERLY ASPECT

N°6

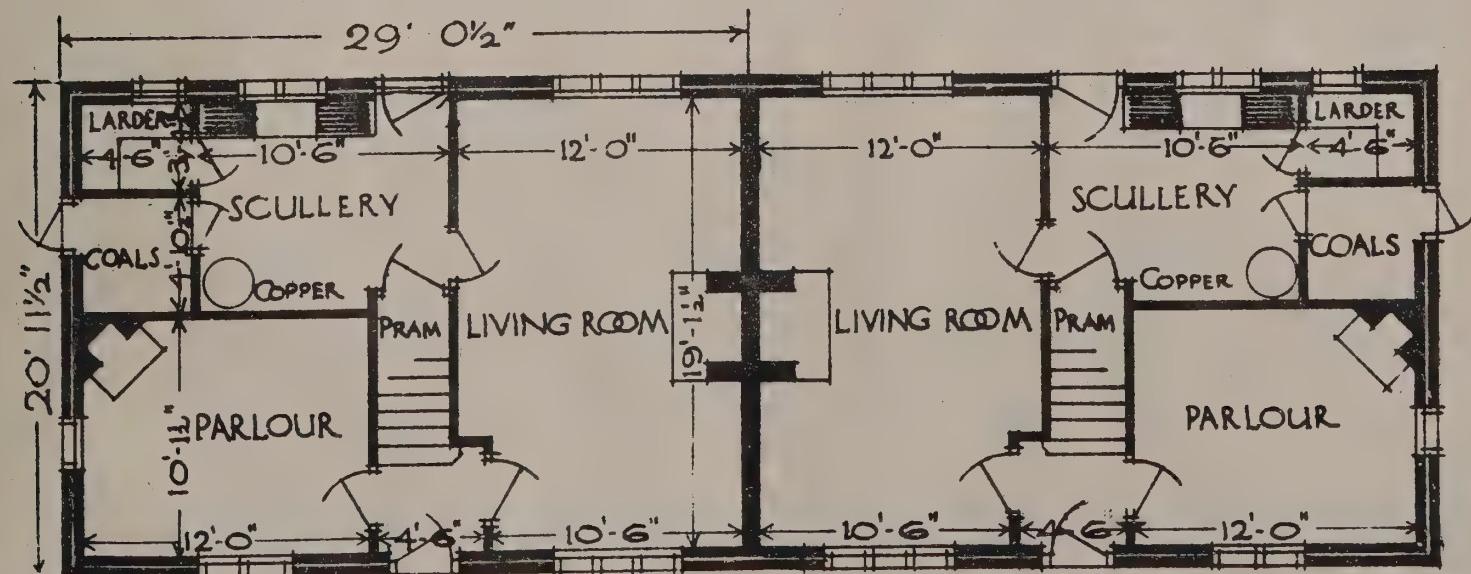
CUBIC CONTENT
OF ONE HOUSE
12934 FEET



ROOF PLAN



FIRST FLOOR PLAN



GROUND FLOOR PLAN

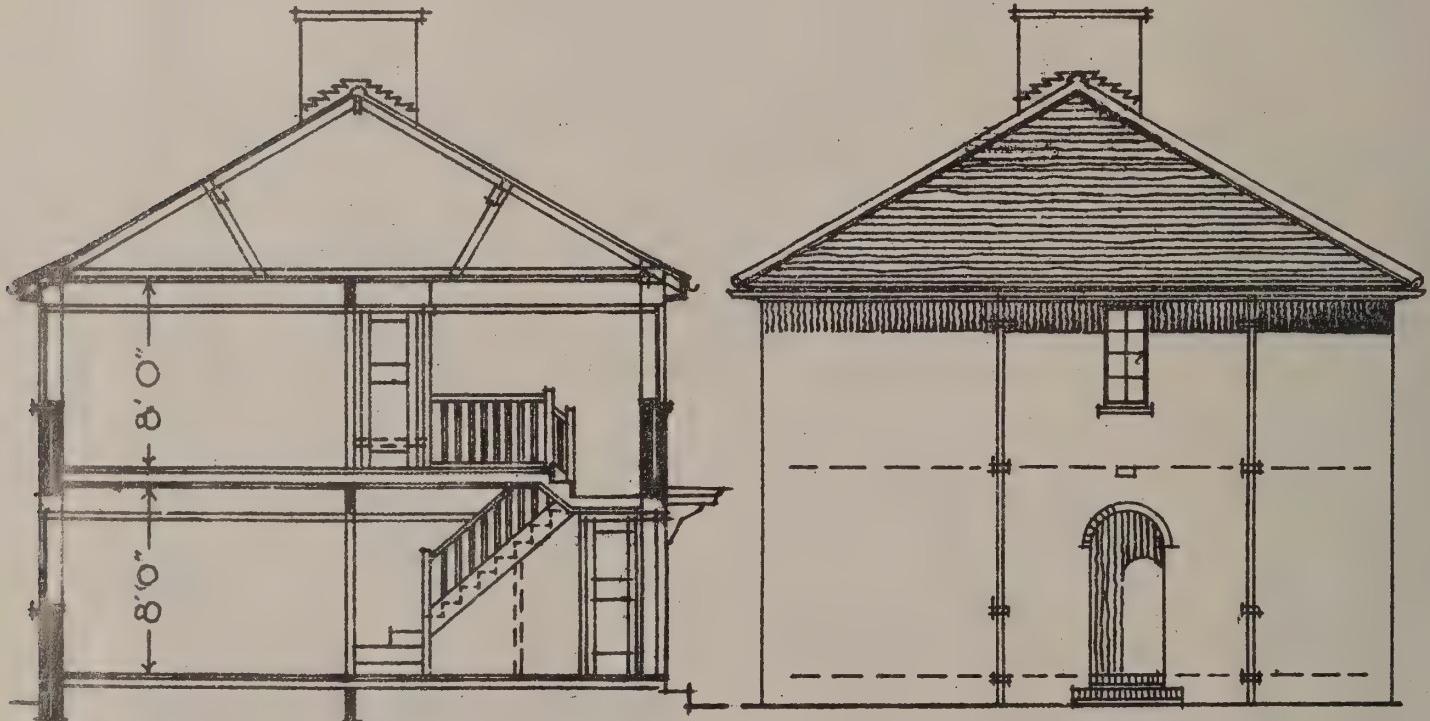
L C B H D

N°7

CLASS B
NORTHERLY URBAN
ASPECT

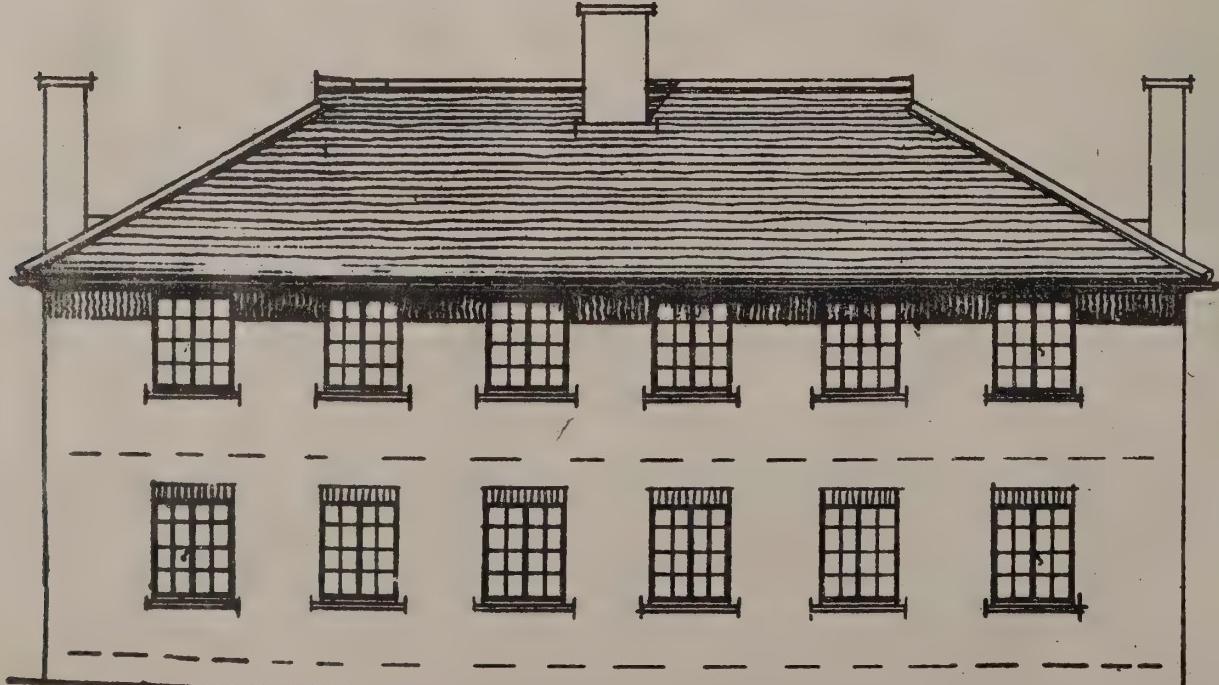


FRONT ELEVATION



SECTION AB

SIDE ELEVATION

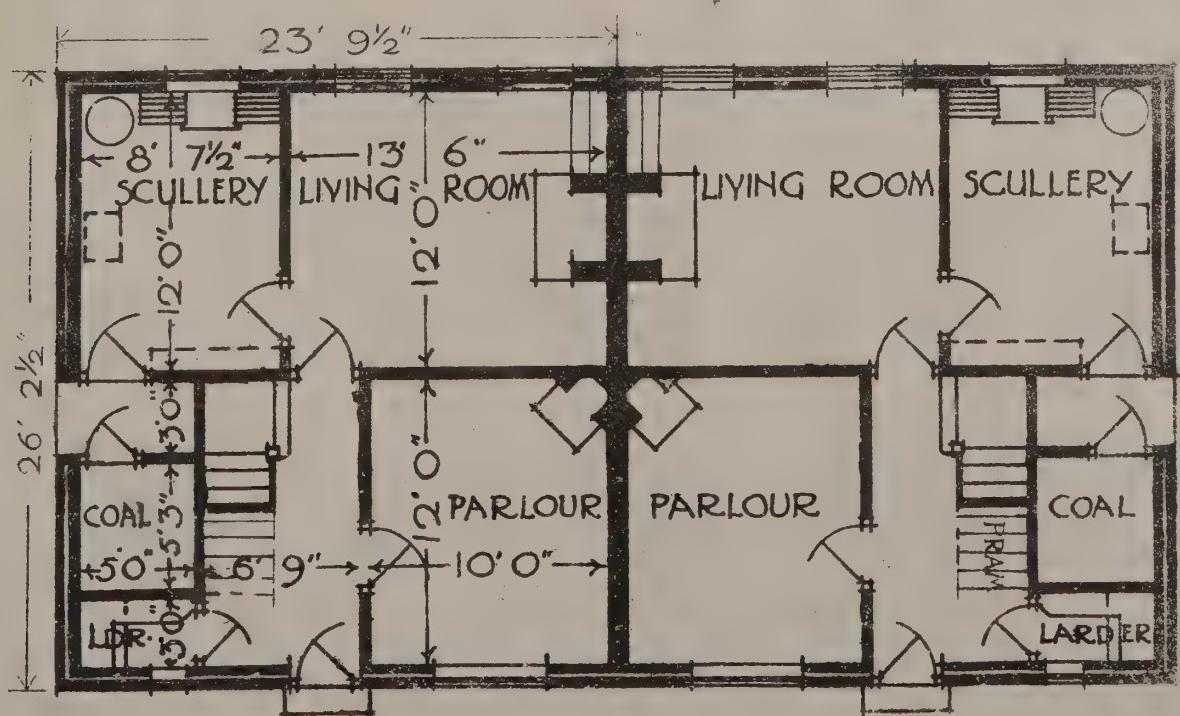
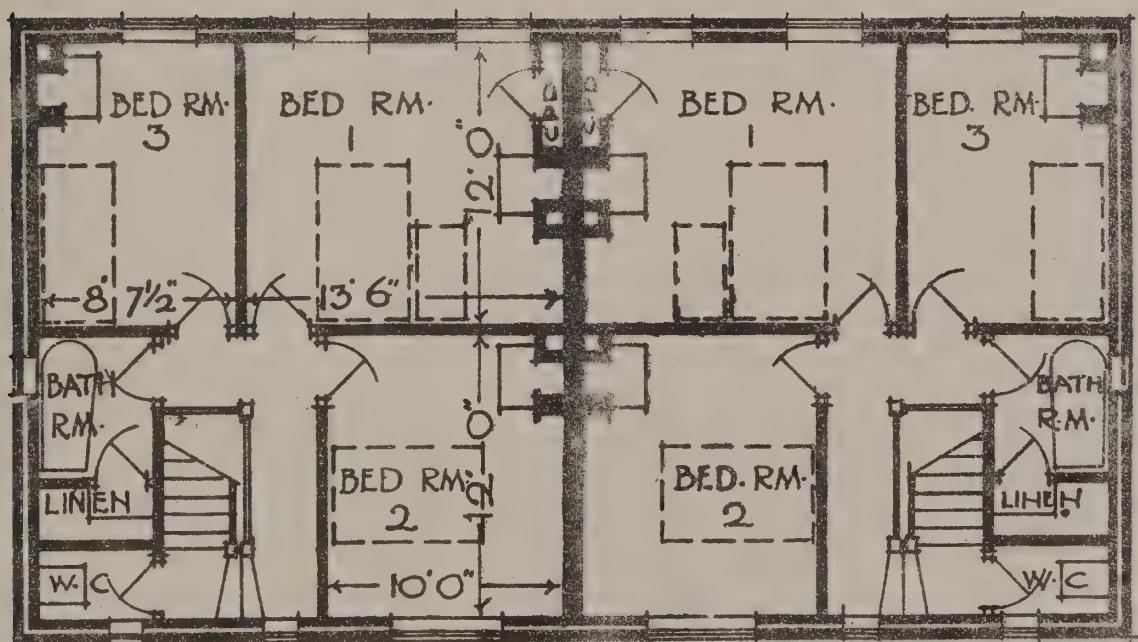
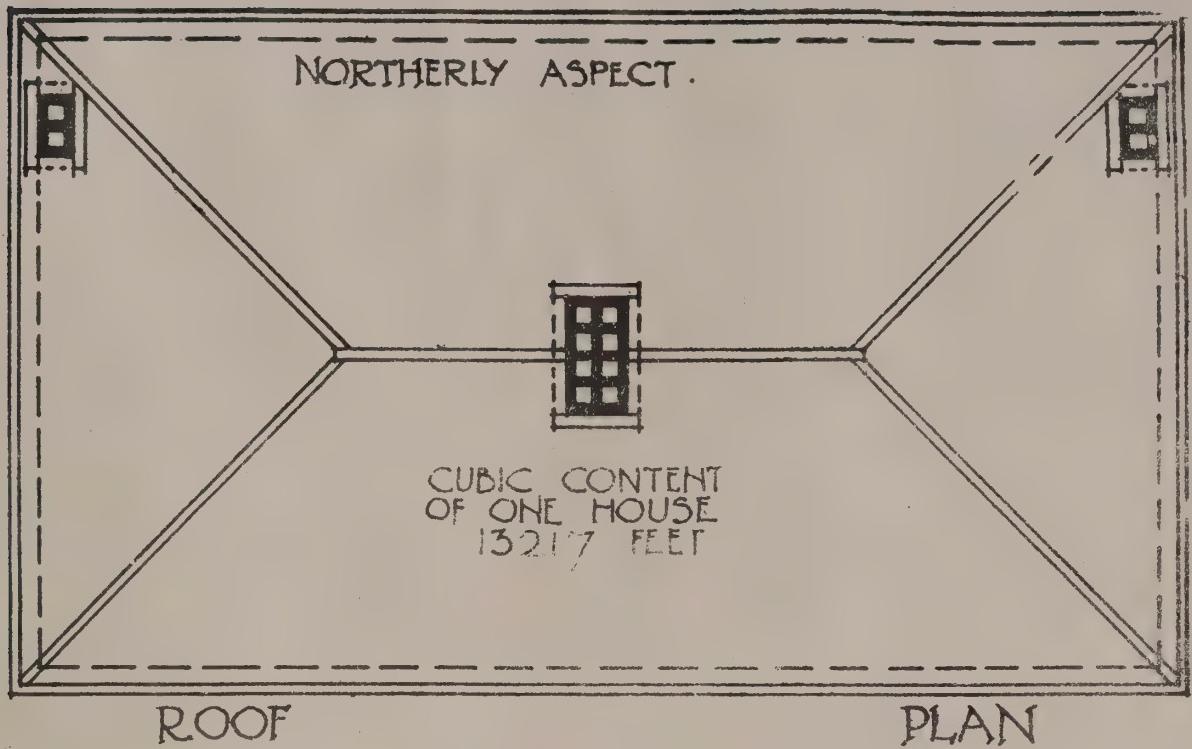


L.G.B., H.D.

BACK ELEVATION

CLASS B URBAN

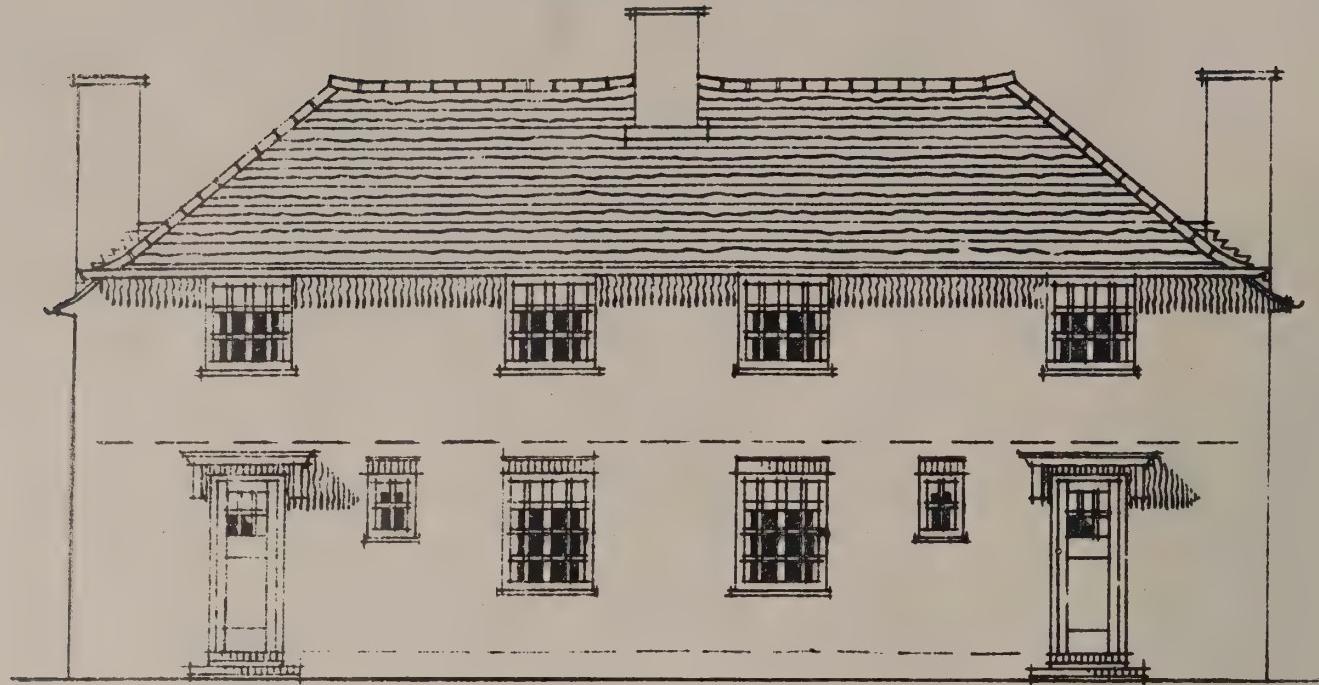
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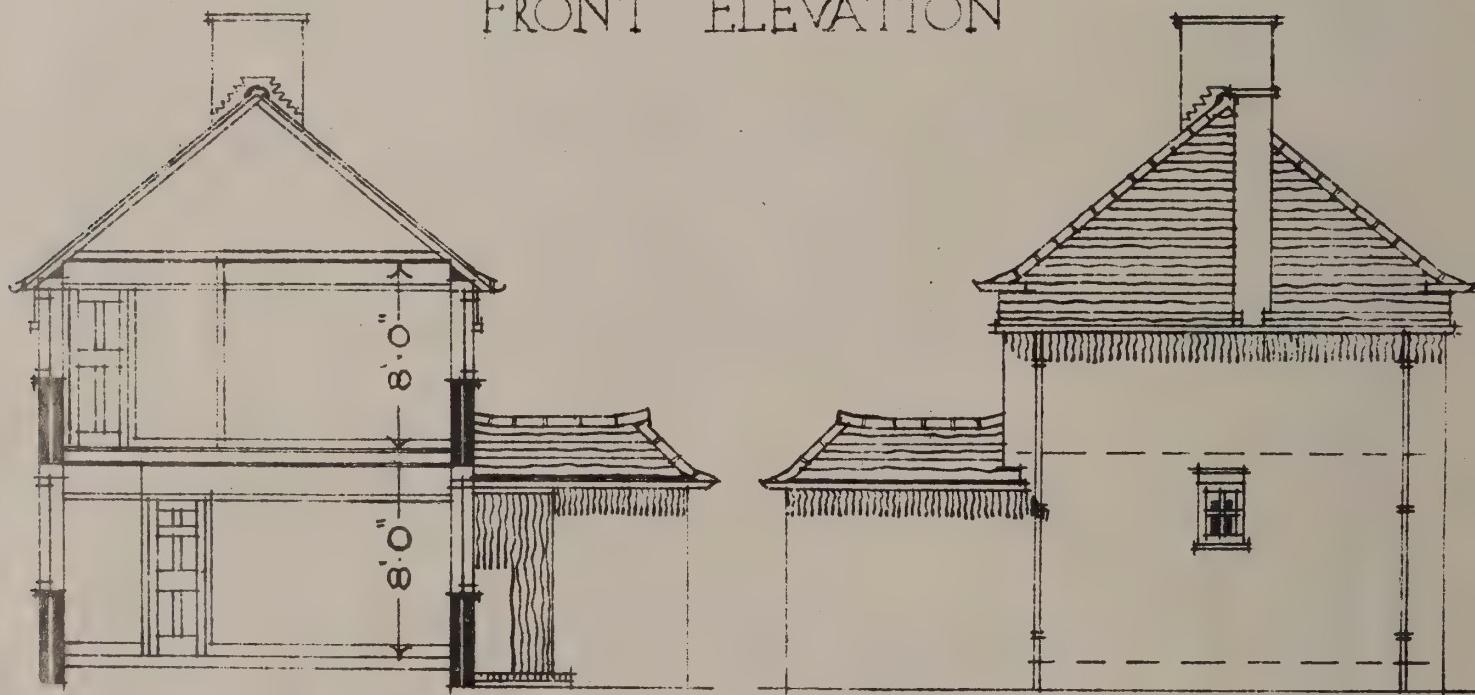
L.G.B.H.D.

GROUND FLOOR PLAN

N°8 CLASS A RURAL
NORTHERLY ASPECT

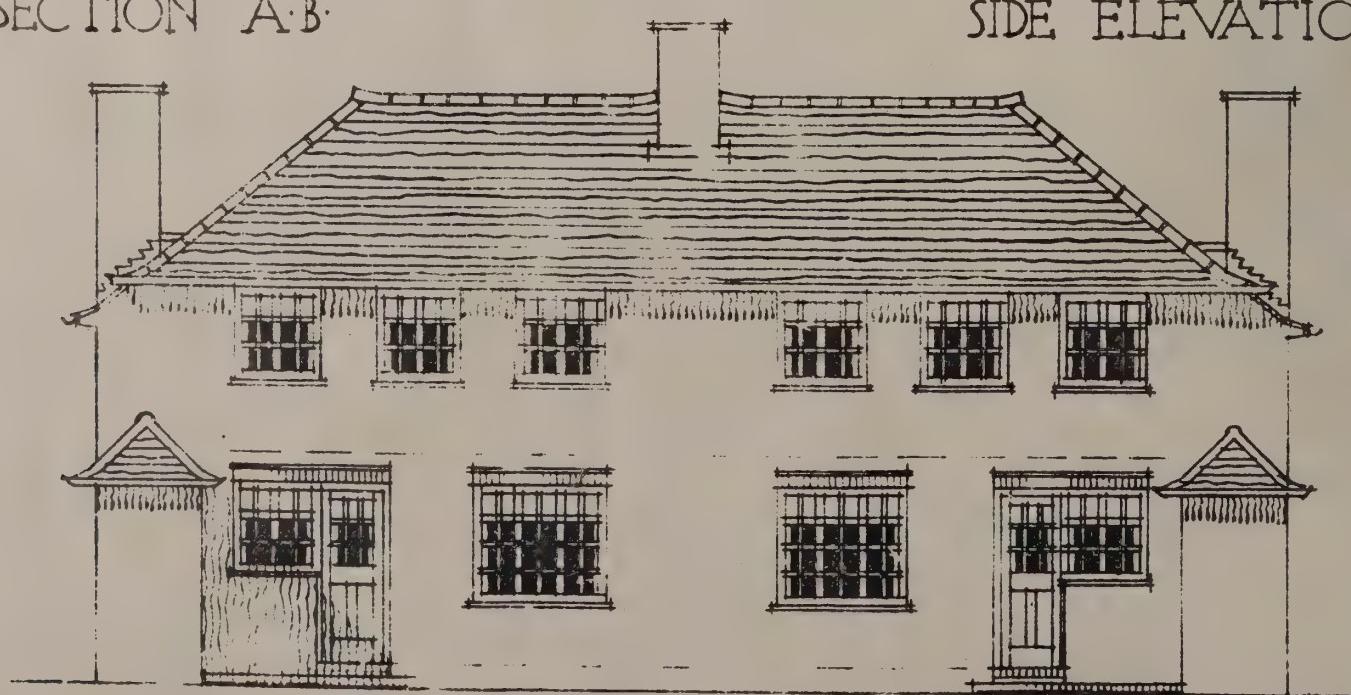


FRONT ELEVATION



SECTION A·B

SIDE ELEVATION

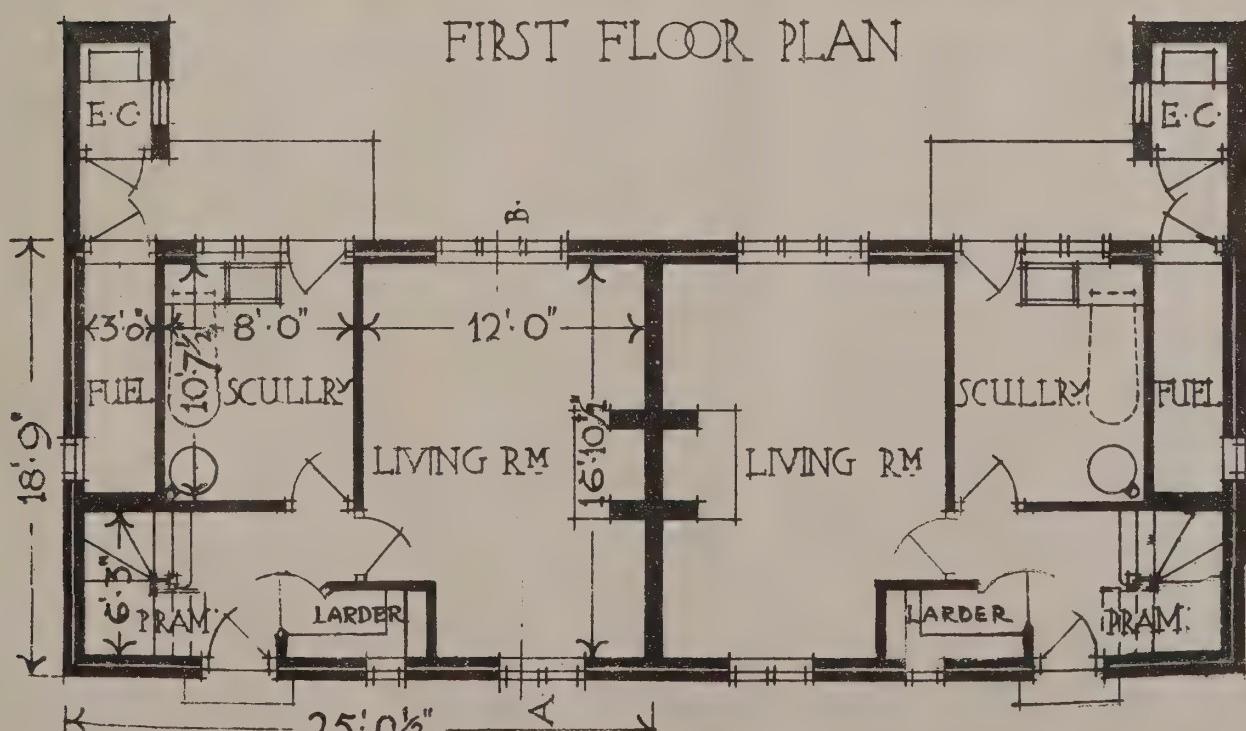
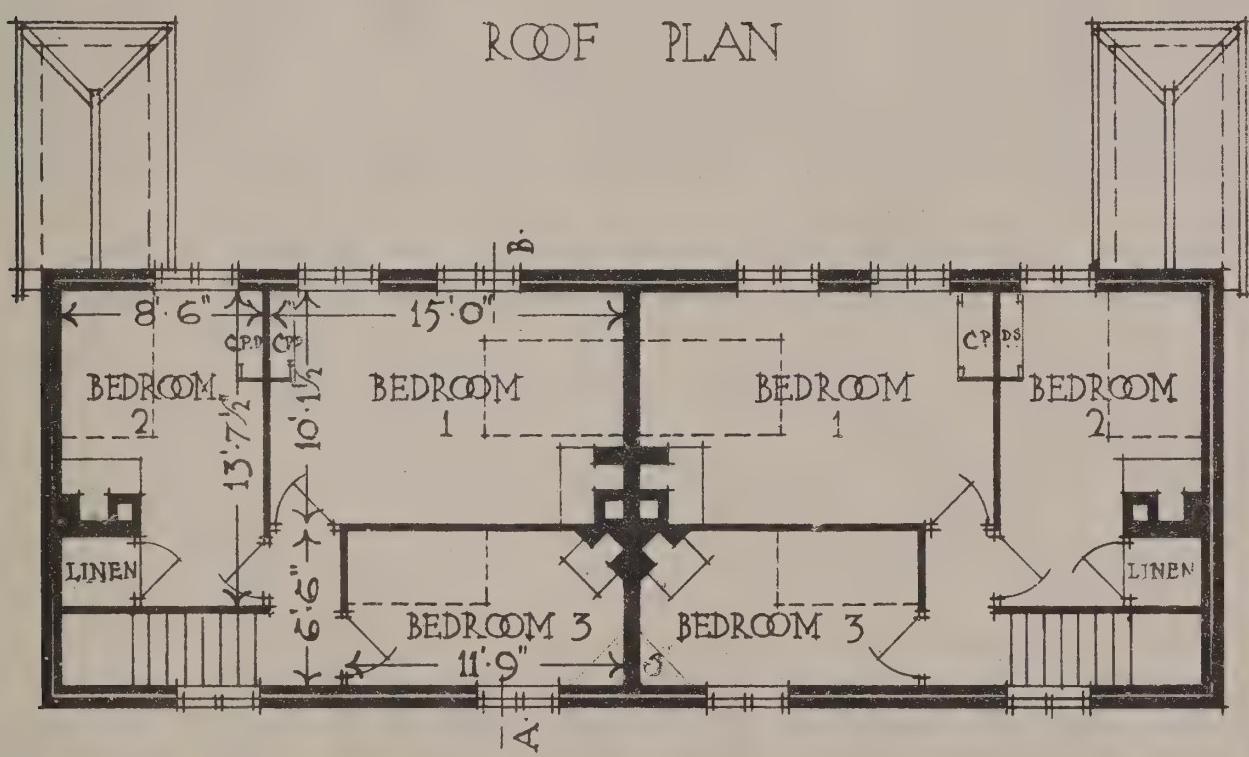
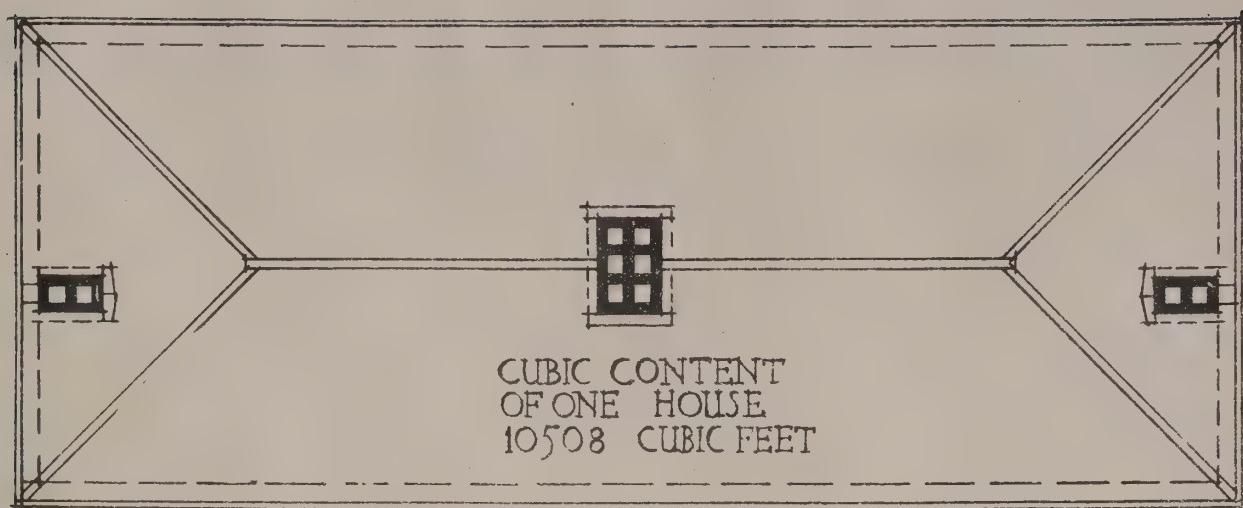


L G B H D

BACK ELEVATION

CLASS A RURAL
NORTHERLY ASPECT

Nº 8



L.G.B.H.D. GROUND FLOOR PLAN

Nº9

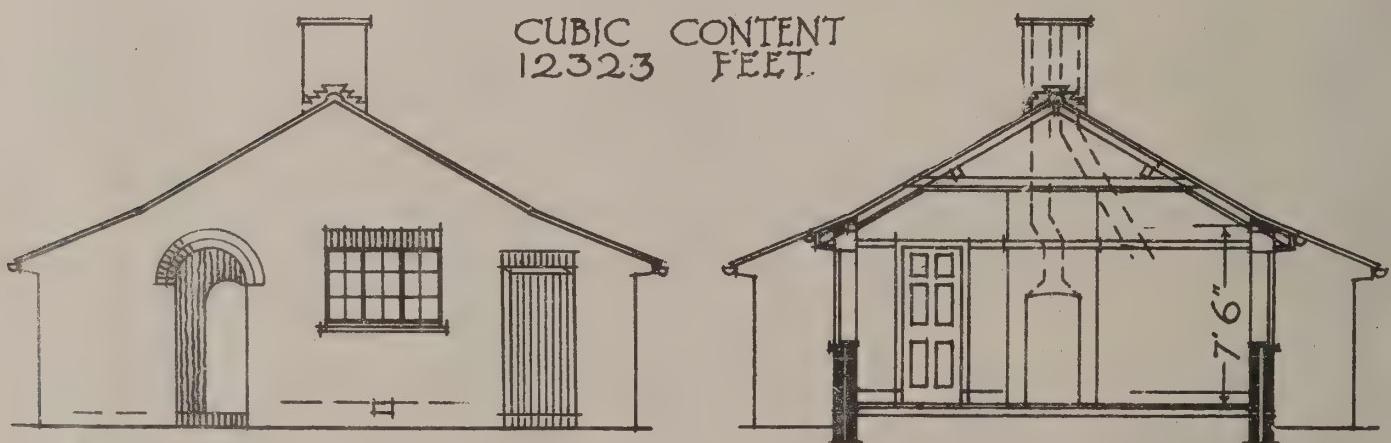
CLASS A BUNGALOW



SOUTH ELEVATION

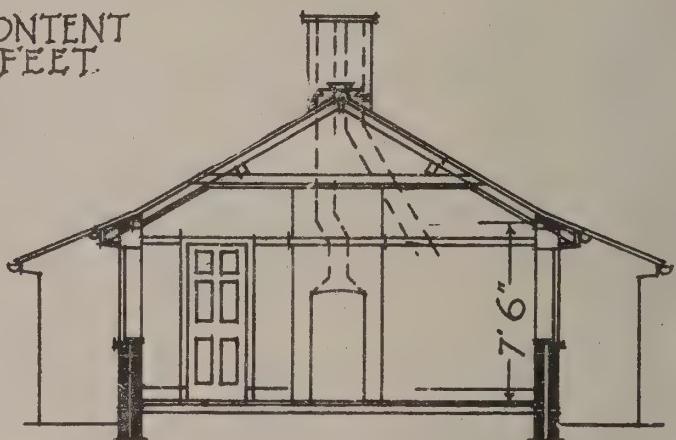


NORTH ELEVATION

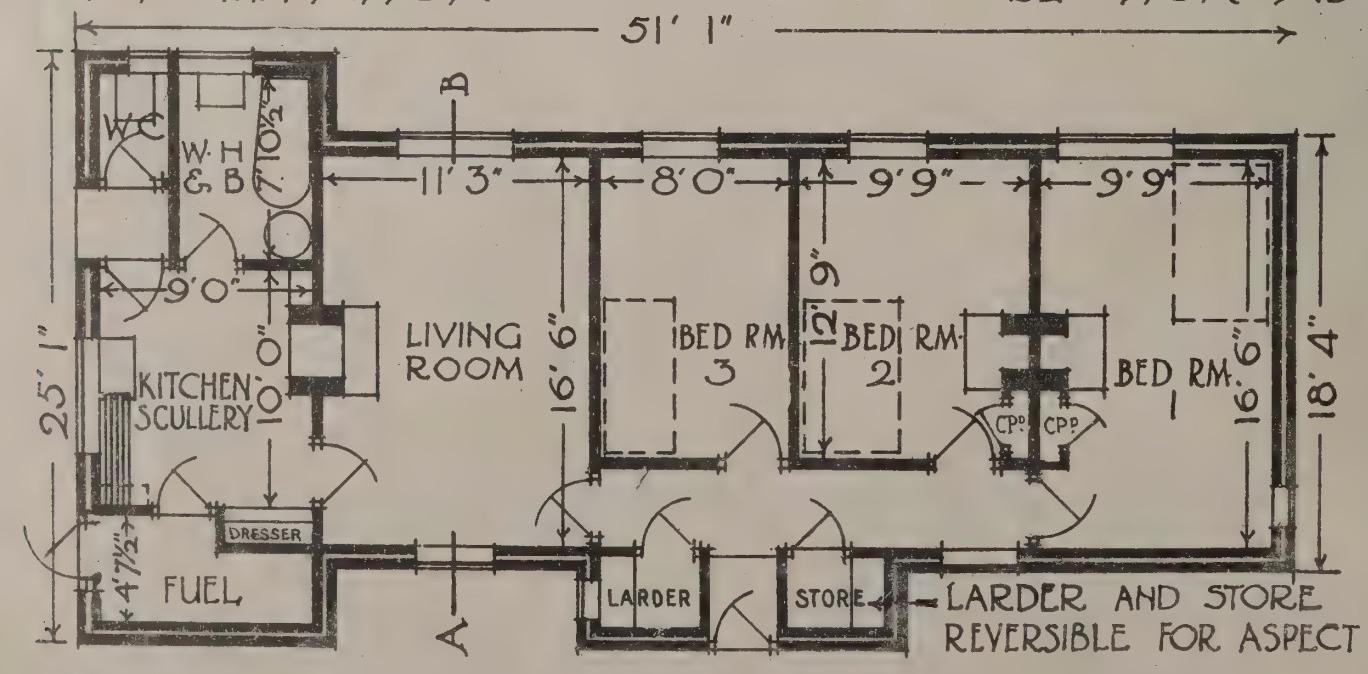


EAST ELEVATION

CUBIC CONTENT
12323 FEET



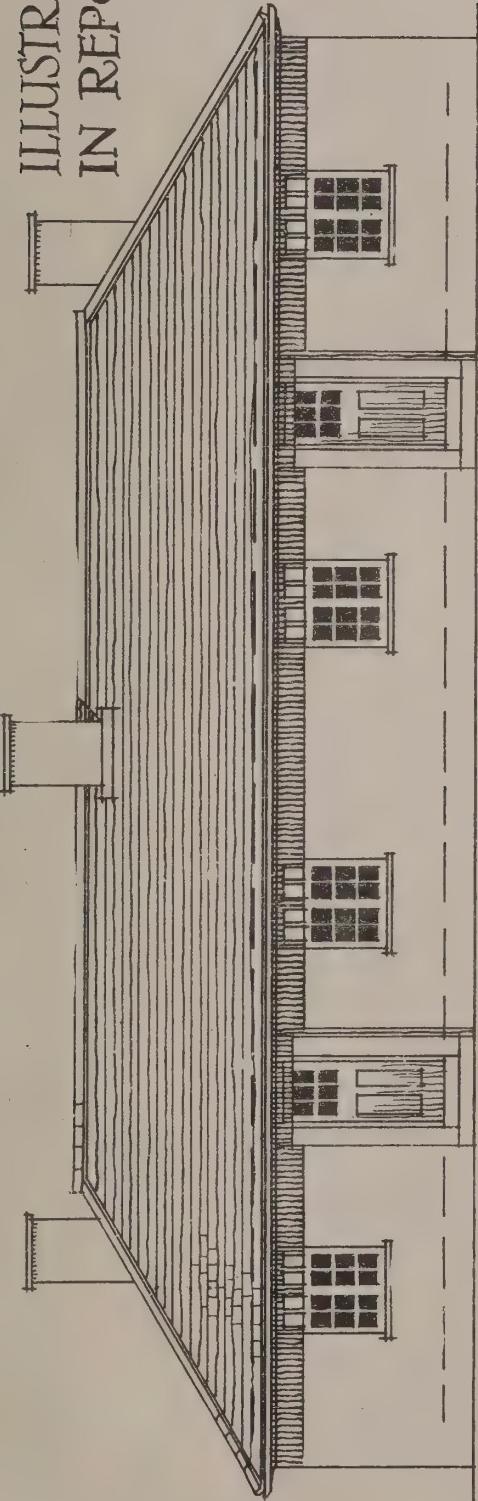
SECTION AB



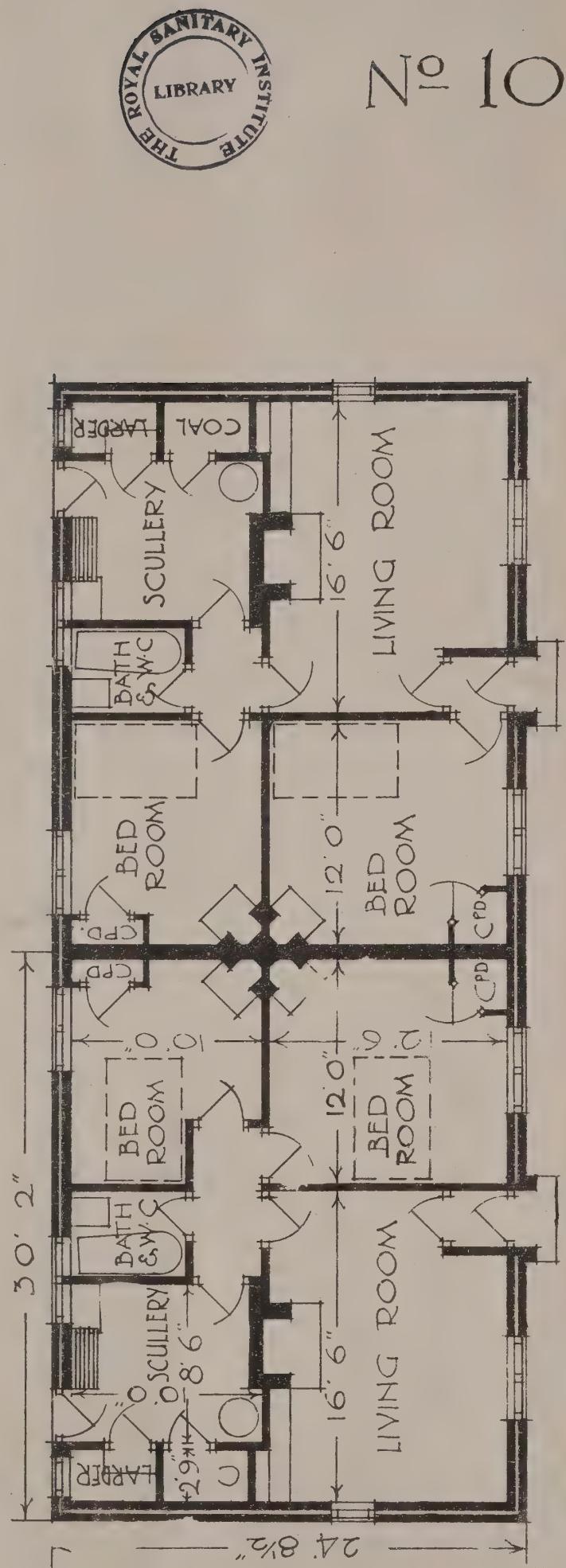
L.G.B.H.D.

GROUND FLOOR PLAN

CLASS A 2 BUNGALOW TYPE

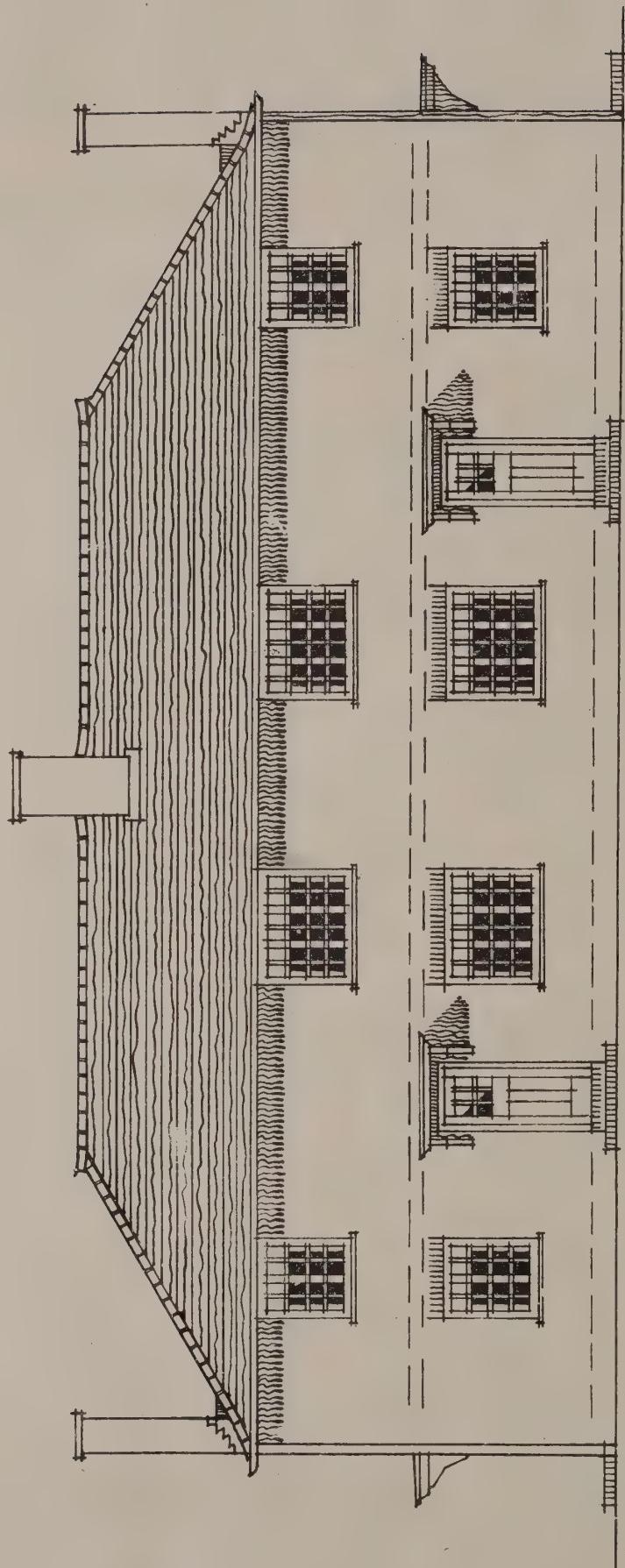


FRONT ELEVATION



CLASS A 2 .. FLATTED TYPE

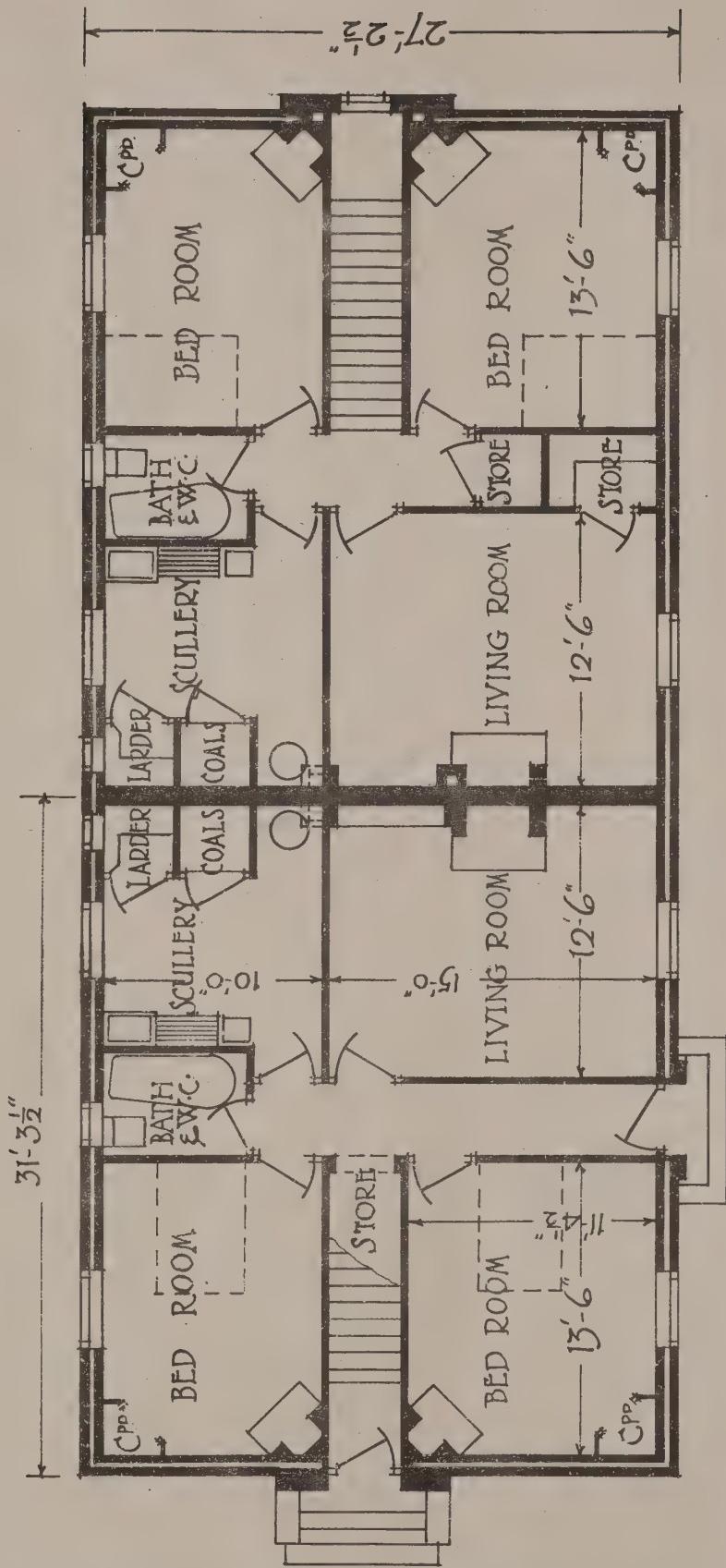
Z° 11



FRONT ELEVATION

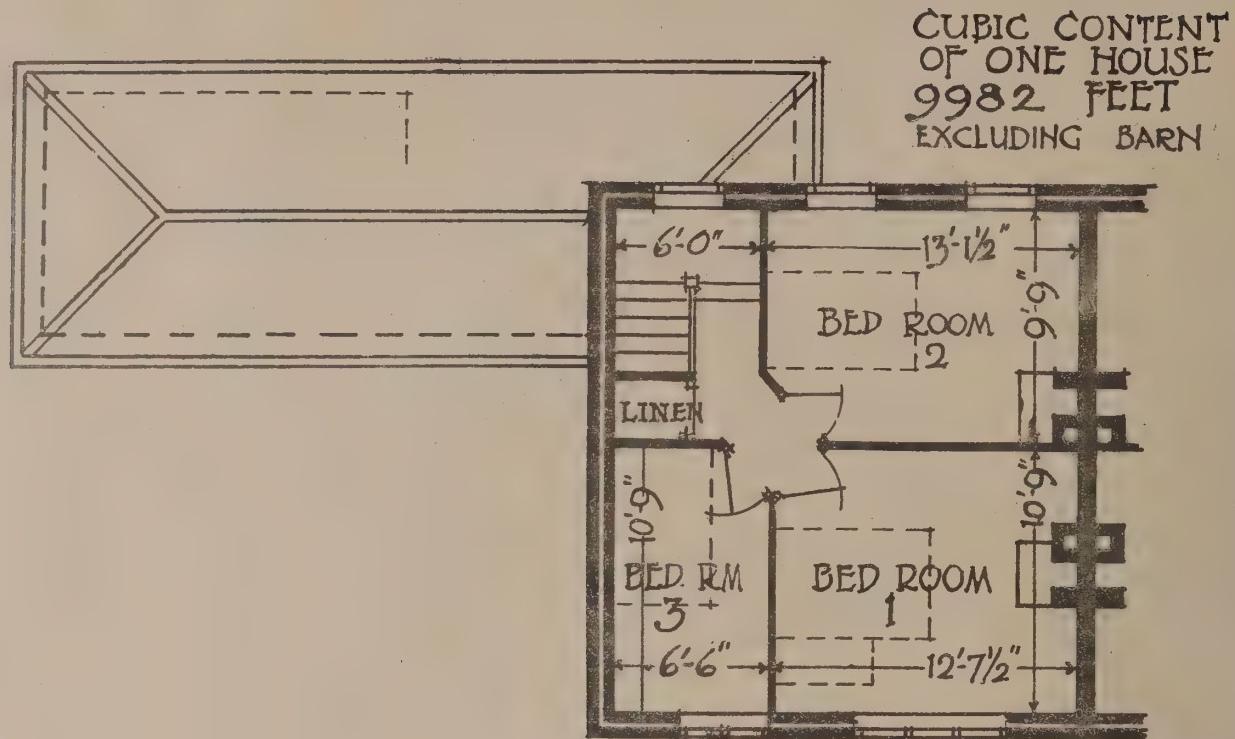
L.G.B. H.D.

CLASS A2., FLATTED TYPE
ILLUSTRATION N° 16A IN REPORT [CD 9191]

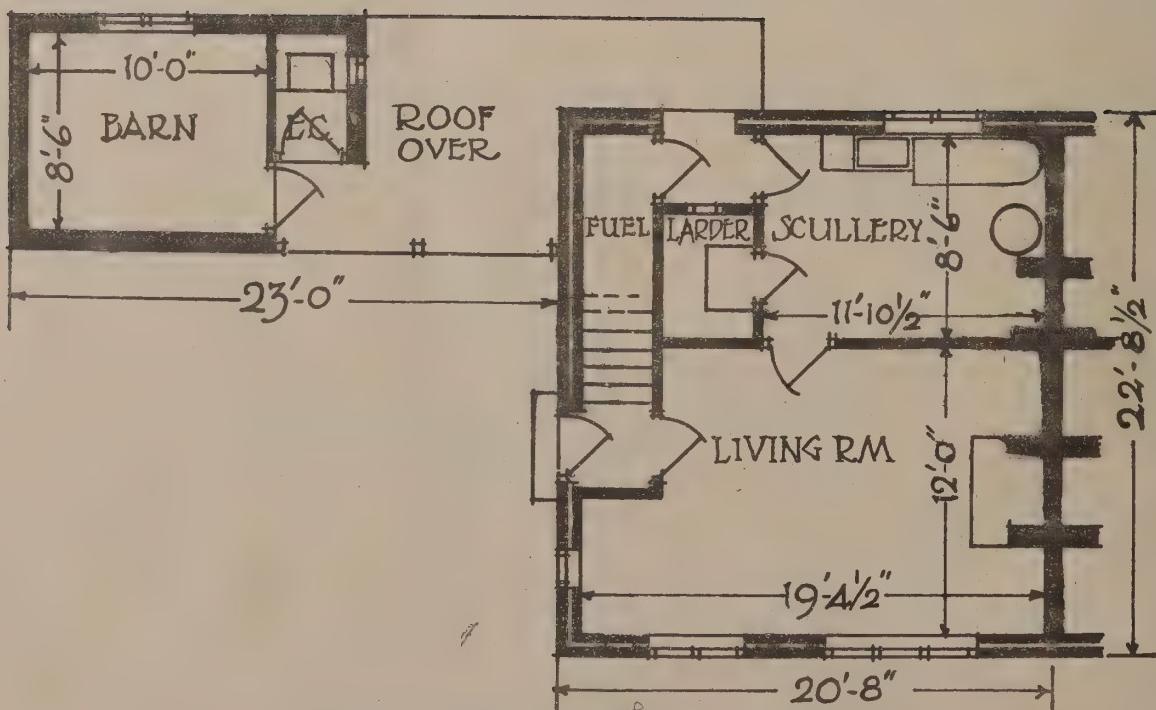


N° 12 CLASS A : RURAL
SOUTHERLY ASPECT

ILLUSTRATION N° 30 IN REPORT [CD. 9191]



FIRST FLOOR PLAN



GROUND FLOOR PLAN

